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LONDON

MEDICAL AND SURGICAL

JOURNAL;

EXHIBITING

A VIEW OF THE IMPROVEMENTS AND DISCOVERIES

IN THE

VARIOUS BRANCHES OF MEDICAL SCIENCE.

CONDUCTED BY

A COMMITTEE OF PHYSICIANS AND SURGEONS.

Quærere verum.—HORACE.

VOL. VI.

LONDON:

HENRY RENSHAW, MEDICAL PUBLISHER, 356, STRAND.

1835.

LONDON:
BRADBURY AND EVANS, PRINTERS, WHITEFRIARS.
(LATE T. DAVISON.)

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THE

London Medical and Surgical Journal.

No. 131. SATURDAY, AUGUST 2, 1834. Vol. VI.

LECTURES

ON THE

PRINCIPLES, PRACTICE, & OPERATIONS OF SURGERY,

BY PROFESSOR SAMUEL COOPER.

Delivered at the University of London, Session 1832—1833.

LECTURE C., DELIVERED MAY 2, 1833.

Gentlemen,—I wish next to draw your attention to a malignant disease of the testicle, that has received a variety of names; by some it is called the *pulpy testicle*, by some it is denominated *medullary sarcoma*, and by others *fungus hæmatodes;* a term that is only at all warranted in a very advanced stage of the disease, when a mass, which, from its look, is mistaken for a fungus, occasionally, though not often, protrudes through the scrotum. It is the *soft cancer* of the testicle, as it is denominated by some writers, on account of its malignancy, that is to say, its having a tendency to extend itself in the course of the absorbents, its disposition to attack other textures, its incurable nature, its general character to show itself again in the same or other parts, after removal by operation, and its connexion with some undefined, but highly unfavourable condition of the system. The disease begins in the body of the testicle, which it enlarges, the swelling extending to the whole of this part of the organ in the course of three or four months. Afterwards the epidydimis becomes involved. While confined to the body of the testicle, the swelling is of an oval figure; one circumstance by which the case may be known not to be a hydrocele; but, as soon as the epidydimis is diseased, the tumour may assume a somewhat pyramidal shape, and be not unlikely to be mistaken for a hydrocele, more especially as the disease is attended with a softness and elasticity, which often lead the practitioner to think that he feels a fluctuation in the part. Indeed there is truly sometimes a small quantity of fluid in the tunica vaginalis. I should say, however, that, with due attention, a medullary sarcoma of the testicle may almost always be discriminated from hydrocele by the tumour presenting a more decidedly oval form than the latter disease, by its greater weight, its having no transparency, its being harder in some parts than others, its not being, after a time, so uniformly smooth as a hydrocele, and its being accompanied by a sallow, unhealthy look, such as is usually indicative of a malignant organic disease of an important part. At first the swelling is not attended with pain; but, after a little while, the patient begins to experience shooting, darting sensations from the testicle, up the spermatic cord to the lumbar region and the groin; and the part will not bear much handling, without a great deal of tenderness being produced in it. The period of life in which medullary sarcoma of the testicle is most frequent, is that between puberty and the age of 35 or 36; but Mr. Earle has recorded a rare instance of its occurrence in a very young child. These circumstances, gentlemen, deserve your attention, because though medullary sarcoma of the testicle is seldom met with in children, medullary sarcoma of the eye is chiefly confined to them.

There are four specimens of this disease of the testicle on the table; some of them, you see, are of considerable size, involving also the spermatic cord. You may notice that all of them exemplify the oval or globular figure of the swelling, and the conversion of the diseased part into a mass of medullary matter, or, as I should say, a pulpy substance more firm than the medullary matter of the brain, intersected by delicate fibrous bands. I have said that the organ is converted into this kind of substance, but this expression would not be strictly correct with respect to many cases, where the medullary substance is not a molecular deposit, after the manner of nutrition, but an adventitious formation, an additional growth, which by its pressure seems to cause the removal of the original tissues. You may meet with examples, in fact, where the glandular portion of the testicle remains unaltered, while a medullary tumour lies beneath the tunica albuginea, or grows from the superficial part of the testicle, and fills the cavity of the tunica vaginalis, of which Mr. Brodie relates

one instance. At last, however, the testis is always implicated.

In the latter stage of the disease, gentlemen, the testicle becomes adherent to the scrotum; the absorbent glands in the groin enlarge and assume the same morbid action; the spermatic cord becomes knotty and unequal; at length ulceration of the scrotum may take place, and a large mass of the medullary substance protrude, from which copious hæmorrhage every now and then occurs. The protrusion of such a mass, however, I believe, is much less frequent in cases of medullary sarcoma of the testicle, than of the breast, eye, and limbs.

I have already told you, gentlemen, that this is a malignant disease of the testicle, and that it has a tendency to extend itself in the course of the absorbents, and to attack many different parts and tissues in the same person. Thus the disease may exist in the loins, that is to say, in one or more of the lymphatic glands behind the peritoneum, and this even when the spermatic cord itself is sound. Too frequently, indeed, the testicle is only one of numerous parts, which are implicated; and soon after removing this organ, you may find your patient die, and on opening him trace various other medullary tumours in the organs or membranes of the cranium, chest, or abdomen. There are some surgeons of great experience, who have removed many testicles, affected with medullary sarcoma, and have not had the satisfaction of seeing one instance of a permanent cure being effected by such operations. This fact, at all events, gentlemen, is a lesson to us in delivering a prognosis; and I advise you, whenever you are about to perform castration for this disease, always to make what is termed a guarded prognosis, that is to say, candidly explain the chances of a return of the disease, and let it not be said, that you have persuaded the patient to submit to the operation as a certain means of cure. Here is a fine specimen of a medullary sarcoma of the testicle, one of considerable size, which I removed from a young man about thirty years of age, who had a remarkably sallow unhealthy look. The case illustrates several interesting circumstances. The patient came from Oxford, where a surgeon had introduced a trocar into the swelling, on the supposition, no doubt, that the case might be a hydrocele. Another practitioner had been led to do the same thing. The punctures, however, healed up very well, without any subsequent inflammation, or any protrusion of the morbid substance, a circumstance which I also had an opportunity of noticing; for, not being aware of these fruitless operations, and fancying one morning that a fluctuation was perceptible, I also passed in a trocar, but no material harm resulted from the experiment, only a very slight degree of pain, the wound healing up completely in two or three days. I showed the case to Sir Astley Cooper, who advised castration, which I performed, and then sent the diseased testicle to him, which he injected and carefully dissected. One section of it, with the spermatic vessels, he retains himself; the other, now before you, he was so obliging as to send to me as a present, very nicely put up as you perceive. In the examination of the cord, minute extraneous substances, some of them less than pins' heads, were noticed in the cellular tissue, which were suspected by Sir Astley Cooper to be of a medullary character. This was a very discouraging circumstance, one that fully prepared me to expect a return of the disease; yet, contrary to my expectation, the wound, caused by the operation, healed up favourably, the man's health improved, and he has continued well to the present time, more than two years after the period, when the testicle was removed. We learn, then, gentlemen, from this case, that the introduction of a trocar into the swelling is not attended with any serious consequences, and even when the patient has a very unhealthy sallow look, and the cord is not entirely sound, there may not be a return of the disease. You must not, however, anticipate success as a common occurrence under these unfavourable circumstances. Be always guarded in your prognosis, I should say, though the case may present much less discouragement than the one which I have mentioned. Here also the best chance of benefiting the patient permanently can only be obtained before the disease has extended itself to other parts; and, if they are already involved when you are first consulted, it will be too late for you to recommend an operation, for the case is of a hopeless description. But, operate when you will, you will find that, in a large majority of cases, the disease will show itself again in some part of the body or another, and bring on fatal consequences. Thus, in one case, where Mr. Cline had removed the testicle for medullary sarcoma, another tumour of a similar nature formed in the lumbar region, and by its pressure destroyed the bodies of the vertebræ near it, so as to injure the medulla spinalis, occasioning paralysis and fatal consequences. This case is recorded by Mr. Brodie. As, however, we have no medicines, no applications that have the power of stopping this malignant form of disease, the knife is the only means that can be resorted to, with any prospect of success, and this, as I have explained, is very uncertain. In some cases medullary sarcoma and cystic sarcoma appear to be blended together in the testicle, as well as in the absorbent glands, which happen to become affected. This modification of the disease is as bad, and difficult to control, as where no cysts are present, and the morbid mass is simply a medullary substance, intersected by very fine membranes, in the manner I have already described.

The rule of operating early in all cases of medullary sarcoma of the testicle is inculcated by every surgeon whose judgment is worth having. It is only at this period that there is

any hope of other parts of the system not participating in the disease. Possibly, in some few instances, the disorder may be at first strictly local, and afterwards become a constitutional one, by reason of the absorption of the medullary matter into the system. In a former lecture, however, I have given you some information on the common characters of this terrible disease, and of the situation and organs in which the medullary matter is found. Sometimes the absorbent vessels, leading from the disease, have been found full of a cerebriform substance; a fact, which Mr. Brodie regards as giving some probability to the hypothesis, that the disease may thus, from being at first local, become more widely diffused, and extended from one to several organs in the body. Operate therefore early, if you are sure that the case is medullary sarcoma. But if you have doubts, try first the plans that were recommended for the cure of chronic inflammation, or enlargement of the organ,—in particular, try the free use of mercury, iodine, and other alteratives. If these fail, and you are certain, that it is not a hydrocele which you are dealing with, you may conclude, that the testicle is disorganised, and that in all probability the disease is medullary sarcoma. If there be any suspicion of fluid in the tunica vaginalis, introduce a trocar, before you resort to castration; for, as you have heard, the puncture will do no harm to the testicle, if it be already disorganised by medullary sarcoma; and if the case be a hydrocele, with a very thick tunica vaginalis, the light thrown on the nature of the complaint will save the patient from a dreadful mutilation.

Scirrhus of the Testicle, gentlemen, exhibiting precisely the same morbid structure, as in the breast, is accounted by some of the best pathologists a very rare disease, if it exist at all. Sir Astley Cooper doubts whether a hard swelling of the testicle, intersected by a net work of strong fibres, or bands, has any existence. You will meet, however, with solid heavy, particularly indurated, almost cartilaginous enlargements of the testicle, with a tuberculated feel, severe pains in the part, the cord, and the lumbar region; some fluid in the tunica vaginalis; and, at length, anasarca of the lower extremities. The patient's countenance is sallow, he becomes surprisingly emaciated, and at length he sinks under impaired digestion, constant suffering, diarrhœa, and loss of rest. This is the kind of disease, which the late Dr. Baillie has described as scirrhus of the testicle. Certainly, though in texture the part affected may not correspond to other examples of scirrhus, it does so in malignancy and incurableness. Here, gentlemen, the early extirpation of the diseased organ is as strongly indicated as in fungus hæmatodes. If the case should be too far advanced for an operation, and the part be ulcerated, all you could usefully do, would be to palliate the patient's misery with opium, hyoscyamus, morphia, and other narcotics, at the same time applying the nitric acid lotion, the liquor opii sedativus, the chloride of soda wash, or the carrot or fermenting poultice, or one made with bread and water, with a proportion of the extract of hemlock, or henbane, mixed with it.

Gentlemen,—I will next notice some of the *diseases of the coats of the testicle*, and *others to which the spermatic cord is liable*. Amongst the former, I have to request your attention to

Hydrocele.—The common hydrocele is a collection of fluid in the tunica vaginalis, producing a pyriform, fluctuating, and, generally, a more or less transparent swelling in the scrotum. I have seen it in persons of all ages, but less frequently in boys than adult subjects. The swelling commences opposite the lower part of the testicle, unattended with pain; at all events, the cases, in which pain is felt at the beginning of the complaint, are not the most common. At first, the tumour is soft, and readily allows the testicle to be felt through the fluid; but, by degrees, it becomes tense, and then the testicle can no longer be perceived. The largest part of this pyriform swelling is below, its diameter lessening gradually as it approaches the abdominal ring. It is only after it has attained a certain magnitude, that its weight and tension cause uneasy sensations in the lower part of the back.

I have told you, gentlemen, that there is usually a degree of transparency in the tumour. Thus, in a dark room, if a lighted wax taper be held close behind one side of the scrotum, and the swelling be viewed from the opposite side, while the surgeon's hand is placed over the external portion of the tumour, the transparency will generally be very manifest. It will always be so, if the fluid be clear, and the tunica vaginalis, cremaster, and other coverings be not too much thickened. This thickening is found to prevail chiefly in large hydroceles; but, as Mr. Brodie has noticed, sometimes it occurs where the tumour is but of diminutive size; and then, if you have an opportunity of examining the parts after death, you find the inner surface of the tunica vaginalis exhibiting a slightly honeycomb appearance, which is suspected by Mr. Brodie to denote that the hydrocele began with inflammation.

Another symptom of hydrocele, gentlemen, is the fluctuation, which may be very plainly distinguished, except when the tunica vaginalis is of considerable thickness. When the tumour is of some size, the testicle is commonly placed about two-thirds of the way down the posterior part of the cavity, a circumstance deserving recollection when you are about to introduce a trocar for the discharge of the fluid.

Sometimes you will meet with hydroceles on both sides of the scrotum: such a case I was consulted about only a few weeks ago; and I shall have occasion to advert to it again, when we come to the subject of hæmatocele.

Although a hydrocele is mostly of a pyri-

form shape, with the thicker part of the tumour downwards, it may assume other shapes. Thus, if much pressed upon by tight small-clothes, or any thing else, the form of the swelling may be altered by that circumstance. Perhaps, however, a deviation of the disease from its common shape may not always be referable to a cause that we can trace. Here is a preparation, in which you see that, in addition to the principal cavity of the hydrocele, there is another pouch freely communicating with it. Then, gentlemen, you will sometimes meet with the well-known case, in which the hydrocele forms two swellings, with the hour-glass contraction between them. If you puncture the lower compartment of such a hydrocele, you may discharge the fluid from both, which proves that they communicate. Such is the usual state of the case; but it sometimes happens, that the two compartments do not communicate, a perfect septum being interposed between them. We are to believe, however, that the communication is open for a time at the contracted part, but that in consequence of the adhesive inflammation, or other causes, the constricted part is at length entirely shut. Mr. Brodie records an interesting case, proving that a hydrocele is sometimes divided in this manner into two portions perfectly distinct from each other. In the case alluded to, the first time the hydrocele was punctured, the trocar was passed into the lower cavity, which emptied both this and the upper one. About a year afterwards, the same method was repeated; but the upper swelling could no longer be emptied in this manner, the incomplete contraction having become a complete one in the course of twelve months.

You should be aware, gentlemen, that some hydroceles communicate with the cavity of the abdomen, in consequence of the upper part of the tunica vaginalis continuing unclosed. This case, which is termed congenital hydrocele, is seen principally in children, but occasionally in adults likewise. The quantity of fluid in hydroceles, which have existed some time, is mostly about eight or ten ounces; but Gibbon, the historian, who I think was attended by the late Mr. Cline, had a hydrocele, from which six quarts of fluid were drawn; and many instances are recorded of the tumour reaching down to the knees. Such an occurrence can only be the result of great neglect. The fluid is also subject to variety in its quality as well as quantity. Sometimes you will observe that it contains flakes of fibrinous matter, the product of inflammation. The fluid is generally very transparent, and of an amber or pale straw colour: it is also coagulable by heat, acids, and alcohol, and resembles the serum of the blood, except in having less albumen in it. Sometimes, however, it is of a much higher colour, and even reddish, particularly when the case has originated with a degree of inflammation about the parts. You will also meet with certain cases, in which loose cartilaginous or osseous substances are contained in the fluid. Occasionally, small, shining, greasy particles are observed in it, which are probably adipocire. In particular instances, the fluid, instead of being clear, is quite turbid and opaque, a circumstance generally proving that the inner surface of the tunica vaginalis has been previously the seat of an inflammatory process.

Gentlemen,—I have mentioned that a hydrocele may be complicated by the presence of a loose cartilaginous body in the tunica vaginalis. In such a case, Mr. Brodie believes that the loose cartilage is the original disease, and it is the irritation of it that keeps up the increased secretion of fluid within that membrane. If the extraneous substance could be felt, and secured in one place directly after discharging the fluid, you should cut upon it and take it out. This proceeding would, no doubt, bring about the radical cure of the hydrocele, both by removing its cause, and by exciting a degree of inflammation. Mr. Brodie relates a case respecting this kind of complication, which I advise you to remember. A patient with hydrocele, whom he used to see occasionally for some years, always experienced vast suffering whenever the fluid was let out. On those occasions, the patient invariably threw himself on the floor, and groaned dismally for a quarter of an hour. After his death, it was ascertained, that the tunica vaginalis contained a cartilaginous body, which, whenever the fluid had been voided, appeared to have been the cause of the patient's agony.

I have already told you that the tunica vaginalis, the cremaster, and the cellular tissue are often excessively thickened in hydroceles of long standing. I may next state to you the possibility of your meeting with examples, in which that membrane has ossifications upon it.

The testicle itself is usually healthy, sometimes, however, trivally increased in size; sometimes rather lessened, as in the preparation which I now show you. The testicle may also be much diseased, constituting what is termed hydrosarcocele.

Gentlemen, among the best diagnostic signs of a hydrocele, I would have you recollect very particularly its transparency, its fluctuation, its commencement at the lower part of the tunica vaginalis, its gradual extension upwards, its pyriform shape, and, what I have not yet mentioned, the circumstance of a portion of the spermatic cord between the abdominal ring and the upper part of the swelling remaining free and unsurrounded by the fluid.

You will be able to discriminate a hydrocele from a sarcocele, or diseased testicle, by the latter being much heavier, more globular or oval, and flatter at the sides than a hydrocele; by its being also more solid, and productive of a peculiarly sickening pain when compressed; by its being attended with a

greater degree of pain in the loins, and very frequently with an unhealthy sallow look, which is not by any means a characteristic of a hydrocele, which is often seen in very healthy persons.

Then, gentlemen, a hydrocele may generally be known from a hernia, by the present or previous possibility of reducing the latter, the impulse in it on the patient's coughing, the direction in which the tumour has passed, its course from the abdominal ring downwards into the scrotum and not upwards to the ring, its lying over the upper part of the cord, and, if the case be a bubonocele, and not a congenital hernia, by the possibility of feeling the testicle below the swelling.

But, gentlemen, you may be consulted for cases, in which a hydrocele is conjoined with a hernia. Under these circumstances, you will generally find that the hydrocele lies in front of the hernia, and if you should be called upon to operate for the latter disease in a state of strangulation, it would obviously be the safest mode of proceeding first to lay open the hydrocele.

A hydrocele, though not a very painful disease in its ordinary states, is yet a considerable annoyance; for it interferes with all active pursuits, and the tumour is much exposed to the effects of external violence. When large, it draws over it likewise a great part of the integuments of the penis, which appears buried, as it were, in the swelling, so that the disease is certainly a serious obstacle to the full performance of coition, though not generally an absolute hinderance. I can conceive, however, that an enormous hydrocele might even amount to such a grievance as this. I have seen a few cases, in which hydroceles were accidentally burst by falls or blows. The result is various; sometimes one of the veins of the tunica vaginalis being ruptured, hæmorrhage takes place into the cavity of that membrane, and the hydrocele is converted into what is termed hæmatocele. In other instances, the tunica vaginalis is rather more extensively torn, and the fluid of the hydrocele passes into the cellular tissue of the scrotum, the original tumour subsiding for a time, but almost always returning after the opening in the tunica vaginalis has closed again. However, if much inflammation were to ensue, the hydrocele might be radically cured by the accident; but the termination will commonly not be so fortunate.

Hydrocele of the tunica vaginalis, I mean the common form of it in adult subjects, that which comes on without pain, very seldom undergoes a spontaneous cure. Mr. Brodie gives one example, however, of such an occurrence in a former chaplain of St. George's Hospital. Probably whenever a spontaneous disappearance of a hydrocele takes place, the event is owing to some previous accidental inflammation of the parts, or the effusion has happened as the effect of inflammation, on the subsidence of which the fluid is absorbed again, and the vessels resume their proper action.

With respect to the *treatment*, I may remark, that in children the disease, when not attended with a communication between the cavity of the abdomen and that of the tunica vaginalis, may generally be cured by lotions containing the liquor ammon. acet., the muriate of ammonia, or other ingredients calculated to excite the absorbents. Iodine ointments rubbed into the scrotum, friction with soap liniment strengthened with the tinct. cantharidum, or blistering the scrotum, as practised by Dupuytren, will also frequently succeed in dispersing hydroceles in young subjects.

The common hydrocele of adults will rarely yield to such plans, and you are obliged to resort to other measures. Now the nature of your proceedings should be chiefly regulated by the consideration, whether your patient is desirous of temporary or permanent relief; in other terms, whether he is willing to submit to what is called the *palliative*, or the *radical treatment*, which latter is necessarily attended with more pain. The *palliative* treatment simply consists in discharging the fluid by means of a small trocar and canula, such as I now show you. You are to grasp the back portion of the swelling with your left hand, and puncture it in the central line, about two-thirds of the way downwards from its uppermost part, taking care to incline the point of the instrument a little upwards. In choosing a trocar, be careful that it is well adapted to the canula, and, in particular, that the extremity of the latter does not form too great a circular projection on the trocar by being too wide or too thick; for when this is the case, the entrance of the trocar into the tunica vaginalis will be very likely to be stopped by the circular prominence of the instrument, and you will either not get the canula into the hydrocele at all, or succeed only by forcible and repeated trials, which give the patient considerable pain, and form a display of awkwardness not likely to keep you in favour with the party operated upon. Attention to minute things in the practice of surgery, such as the make of the trocar, is often of great importance to a man who values his professional reputation; and I have known serious mischief done to the patient by inattention to the construction of this instrument. Having withdrawn the trocar, and let out the fluid, during the flow of which you must keep the canula well introduced, (for if it slip out of the tunica vaginalis you will not be able to put it in again,) you may place a bit of plaster over the puncture, and apply a suspensory bandage, which latter, however, is not essential, and is often dispensed with.

Now, gentlemen, if any accidental circumstance bring on inflammation after the operation, it may lead to a complete cure; but this only happens in a small proportion of cases, and hence the method, now described to

you, is called by surgeons the *palliative treatment.*

The *radical* consists in discharging the fluid, and then adopting some measure calculated to excite inflammation of the testicle, or rather of the inner surface of the tunica vaginalis. You may fulfil these indications by different proceedings. About half a century ago surgeons sometimes applied caustic to the scrotum, which produced a slough, the separation of which was followed by the issue of the fluid, and the requisite inflammation of the tunica vaginalis. This plan was at length renounced as unnecessarily severe, and not certain of success. At the same period, the practice also prevailed of passing tents and setons into the tunica vaginalis for the cure of this disease. The seton was in favour for a long time, and even now, though not used for the present form of hydrocele, is sometimes employed in another variety of it. Then, another plan of cure consisted in making a free incision into the swelling, so as at once to let out the fluid, and make such an exposure of the cavity of the hydrocele as was followed by inflammation, suppuration, granulation, and the obliteration of it. This last mode of treatment is still advisable under particular circumstances. But the best practice, that to which all the most experienced surgeons in this country give the preference, is to discharge the fluid, and immediatcly afterwards to throw some stimulating fluid into the cavity of the tunica vaginalis, for the purpose of bringing on the necessary degree of inflammation. This operation requires a simple but well-made apparatus, composed of a trocar and canula, and an elastic gum bottle with a brass neck, furnished with a stopcock, and of a size exactly adapted to the mouth of the canula. Some surgeons use an injection containing sulphate of zinc; others employ a solution of alum, or brandy and water. Port wine and warm water in equal proportions are what I generally employ, and they have commonly been preferred in London ever since they received the recommendation of the late Sir James Earle. The fluid of the hydrocele having been discharged, and the elastic bottle filled with the lotion, you push the end of the stopcock into the mouth of the canula, and throw the injection into the tunica vaginalis. Before you do this, however, be sure that the internal end of the canula has not receded from the cavity of that membrane; for if it has done so, the injection will pass not into that cavity but into the cellular membrane of the scrotum, and bring on extensive abscesses, or even a dangerous sloughing of the parts. I remember once assisting a surgeon in this operation, and telling him to be on his guard against this accident, the risk of which he seemed to think very trivial. He told me, that he had tapped numerous hydroceles without the occurrence; and yet, from not paying attention to keep the canula well in during the discharge of the fluid, and the shrinking of the tunica vaginalis, the very thing now happened which he considered to be impossible under his management. Abscesses and some gangrenous mischief followed; but I believe the hydrocele was radically cured, which might not have been the result. On the average, the injection may be kept in from five to ten minutes. In young persons three minutes will suffice. I advise you, gentlemen, not to throw in a quantity of injection quite equal to the quantity of fluid discharged, because if you distend the tunica vaginalis too much, some of the injection is apt to flow out by the side of the canula into the cellular membrane, and occasion suppuration, or even sloughing. If the testicle should be affected with chronic enlargement, this circumstance ought not always to deter you from employing the injection, which, in such a case, has often brought about a cure. After the operation, put a piece of adhesive or soap plaster over the puncture, and when inflammation has come on, apply a poultice. At one time it was supposed, that this method produced a cure by obliterating the cavity of the tunica vaginalis, or by exciting the adhesive inflammation in it, followed by the union of the loose tunica vaginalis to the portion of it reflected over the testicle; and that, unless such union took place, the hydrocele would return. But, gentlemen, it is now well ascertained, that a hydrocele is often cured without the cavity of the tunica vaginalis being obliterated, and on another principle, namely, the injection excites inflammation of the interior of that membrane, followed by some permanent change in the state and action of the vessels of the part, whereby they are prevented from continuing to secrete a redundant quantity of fluid; and there seems to be a restoration of the due equilibrium between secretion and absorption.

LECTURES ON THE THEORY AND PRACTICE OF MEDICINE,

BY WILLIAM STOKES, M.D.,

Delivered at the Medical School, Park Street, Dublin.—Session 1833–34.

LECTURE XXIX.

Recapitulation — Connexion of Temperaments with the disposition to Apoplexy—Researches of Rochoux—Principles of Diagnosis—Varieties of Apoplexy—Connexion of Symptoms with Pathological Appearances—Double Effusions—Rupture into Ventricles—Hemiplegia—Value of the suddenness of Paralysis as a Diagnostic examined.

Gentlemen,—At my last lecture, I spoke of the nature of apoplectic effusions; I stated that they exhibited a considerable variety as to their situation, extent, number, and condition in different cases; that it was frequently a matter of great difficulty to ascertain their

source, and that they might occur at any age, but chiefly from that of fifty to seventy. I gave a brief sketch of the process adopted by nature in effecting a cure, and showed that in many cases, where the effused blood is absorbed, there is scarcely any trace of the disease, except a slight cicatrix, but that in some instances, where the sanguineous effusion has been removed, its place becomes occupied by a quantity of serous fluid, and this, with the cyst which contains it, seems to explain what the old anatomists termed *false ventricles*. You will find, by looking over some of the earlier writers on anatomy, that they have described the brain as containing more than the ordinary number of ventricles, and the mistake seems to have arisen from their taking for ventricles those serous cysts or cavities which remained after the absorption of an apoplectic effusion. Of course other causes, such as congenital formation, may give rise to the appearance. You will see in the museum of the College of Surgeons a fine specimen of anormal cavities filled with serum in different parts of the brain.

In speaking of the period of life at which apoplectic disease is most frequent, I stated, that though it might occur at any time of life, still there was a particular period at which there is a greater liability than any other. Rochoux has shown that the tendency to apoplexy is greatest towards sixty, and diminishes towards seventy years of age. The number of cases which occur between sixty and seventy are very great, when compared with those between seventy and eighty; and after eighty he considers the liability to be still farther diminished. It seems strange, that persons after seventy should not be so liable to attacks of apoplexy as before that period, but such is the fact. It has been thought that this may be explained by the anæmic state of the brain in old persons; it is said, that at such an advanced age general emaciation takes place, and the quantity of blood is greatly diminished. This explanation, however, is doubtful, because it is at present well ascertained, that persons of ordinary development, who are neither fat nor thin, and also persons of spare and delicate habit, are as much, and even more, liable to apoplexy than the fat and plethoric. It has been ascertained by careful investigations, that a high degree of plethora does not necessarily predispose to the disease, and that it is oftener met with in persons not of a plethoric habit than in those who are. These considerations throw some doubt on the opinion that an exemption from apoplectic attacks is connected with an anæmic condition of the system. It generally happens, however, that at this advanced period of life, from the general debility of the system, and the incapacity for active exertion, a man ceases to employ his thoughts about business, and there is little exercise for the intellectual functions. We now have finished the task; the brain reposes from the turmoil of active and incessant thought; there is a comparative absence of mental exertion, and this may in some degree account for the rarity of apoplexy after the age of seventy.

With respect to the different temperaments as bearing on this point, Rochoux shows that in Paris, at least, there was a nearly equal frequency of the disease in individuals of the sanguine, sanguineo-bilious, and sanguineo-lymphatic constitutions. The bilious temperaments, however, are much less liable. Such is the result of the observations in Paris; but it must be recollected, as Rochoux observes, that in that city the bilious temperament is the rarest. With respect to the sanguine or plethoric, it has been found that this temperament does not predispose to apoplexy so much as has been generally supposed. The disease has been observed to be most common in persons of ordinary development, next to those in persons of thin, spare habit, *and last of all, in the plethoric and fat*. Rochoux's researches lead him to conclude that the number of persons of ordinary development, attacked by apoplexy, is three times that of the plethoric, and that that of the spare habits is little more than twice as great as that of the fat and plethoric. If these researches are correct, they afford great consolation to stout gentlemen.

The conclusion, which has been come to, with respect to temperaments as bearing on the liability to apoplexy, appears to be true, namely, that there is no sign appreciable by the senses which will unequivocally point out a predisposition to apoplexy. This is of great importance in a practical point of view. You may expect the disease in the fair or dark haired, the thin or fat, alike. The frequent occurrence of this disease in persons who were never suspected to have any predisposition to it is another proof in favour of this opinion. With respect to the mere medical diagnosis of apoplectic effusion, it would be well if, in making it, you would always bear in mind the anatomical characters of the disease. Extravasation of blood into the substance of the brain generally takes place by a tearing or separating of the cerebral tissue. A quantity of blood is rapidly effused, the substance of the brain torn, and a cavity formed. There can be no doubt that the tissue of the brain is torn, for we can see the loose shreds hanging on each side of the cavity, and mixed up with the clot. Now, what are the principles which should guide us in making our diagnosis? They are exactly the same as those in other diseases *connected with a sudden solution of continuity in the substance of internal organs*. We have, with or without any preceding symptoms of a different kind, the *sudden* supervention of new and remarkable phenomena. The phenomena which are the result of disease proceeding in its ordinary course are gradual and progressive; but occurrences of this kind are almost always characterised by sudden and well-defined symptoms. Thus, we make the

diagnosis of the rupture of an aneurism of the aorta from the sudden vomiting or expectoration of blood, followed by the death of the patient. Here, you perceive, the diagnosis is founded on the *sudden* supervention of new symptoms. In the same way we make the diagnosis of pneumothorax with a fistulous opening communicating with the bronchial tubes, and calculate from the sudden occurrence of pain in the side and the other signs of pneumothorax, that there has been a solution of continuity in the pleura. Again; if a person, labouring under hepatic abscess, is seized with a fit of coughing, and suddenly expectorates a quantity of pus, and that this is found to be accompanied by a subsidence of the tumour in the region of the liver, we make the diagnosis of perforation of the diaphragm and pleura, and the escape of the contents of the abscess into the substance of the lung. Or he may, under the same circumstances, be seized with sudden and rapid peritonitis, and here we make the diagnosis of an effusion into the peritoneum. It is on precisely the same principles that Louis has established the diagnosis of perforation of the small intestines in cases of gastro-enteritis. The patient is lying in bed, perhaps apparently improving; he is not exposed to any exciting cause, and every care may have been taken of him. *On a sudden* he exhibits symptoms of intense peritonitis, and rapidly dies. Any one conversant with such cases can easily make a correct diagnosis. On the same principles we found the diagnosis of apoplectic effusion. Almost all the instances of disease which I have given occur with a *sudden* violent invasion; and the same thing may be said of apoplexy with extravasation. It is true, that there are some cases which do not exhibit this character, but the general rule is suddenness of attack.

We may divide apoplectic attacks accompanied by extravasation into three great classes; and, if you look to the great majority of cases of this disease, you will find that, although they appear to pass by insensible degrees into one another, still, when taken and examined singly, there will be found a difference between them. This classification is that of Rostan, and I have known his principles verified in many instances. In the first class of cases, which are the worst and generally prove fatal, the extravasation is enormous. A person, apparently in perfect health, will fall down in a fit of apoplexy, remain for a short time insensible and paralytic, and then die. In such a case as this, the ordinary pathological character is an enormous effusion of blood, or excessive congestion. In a case of the second class, we have an apoplectic seizure with coma, which disappears after some time, and the patient recovers his intelligence, *but with paralysis of one side.* The pathological character of this form is, that the effusion is more limited and exists only on one side of the brain. Neither is the congestion so severe, and the patient recovers from the coma. In the third form, we have an attack of apoplexy of a milder description; there is scarcely any coma or loss of intelligence, and the paralysis is slight, generally affecting the muscles of one side of the face or of one of the extremities. Let us repeat these varieties. In the first, which constitutes the *apoplexie foudroyante* of the French, there is an enormous extravasation of blood in both sides of the brain; or, if it be only on one side, the amount of the effusion is frequently such as to burst through the walls of the ventricles and get into their cavities, and in this way we may have an effusion of one side getting into the other hemisphere, or exercising such pressure on it as may give rise to *general* symptoms. Such a case as this is, I believe, generally fatal; its progress, too, is very rapid, several persons under such circumstances having died in the space of an hour, or less. In the second form, there is coma and loss of intelligence, and the patient recovers *with paralysis of one side.* Here the extravasation is never so great as in the foregoing case; the effused blood is confined to one side, and does not get into the ventricles. In the third form, the effusion is very much circumscribed, the signs of general congestion or extravasation are slight, the quantity of blood poured out is not, perhaps, larger than a nut, it is followed by partial paralysis, and there is little or no coma or loss of intelligence.

Let us take a brief review of the symptoms which attend each of these forms. In a case of the first description, we find a person, hitherto in the enjoyment of health, suddenly attacked with symptoms of intense apoplexy. You will recollect that in my last lecture I told you that apoplexy consisted in various lesions of the phenomena of the life of relation. In the most violent form of apoplexy, many authors are of opinion that there is a total paralysis in the functions of animal life. The patient falls down and remains in a state of complete insensibility, the eye no longer obeys the stimulus of light, no sound makes any impression on the ear, or odour on the sense of smelling, the sense of taste is destroyed, the skin may be now seared with a red hot iron without the slightest indication of suffering; in fact, sensation, one of the great phenomena of animal life, appears to be annihilated. If we examine further, we find that there is a total suspension of the intellectual functions, and that the patient is unconscious of any thing passing around him. If we go to the muscular system, we find that all that part of it which subserves to the purposes of animal life is completely paralysed. The neck, trunk, and extremities have lost their power; and, if you raise the head, trunk, or one of the limbs, they fall down like dead masses as soon as the support is withdrawn. In some cases there is a certain degree of rigidity in the muscular system, in others not. We may observe, also, that from the paralysis of the buccinators, the cheeks are alternately puffed out

and sucked in during respiration. As far as my experience goes, I believe that this symptom is fatal. Here, then, we see that the great phenomena of the life of relation are suspended. The functions of organic life, however, still continue to be performed, the heart beats, respiration goes on, and the power of secretion remains; but, after some time, the functions of organic life are also suspended, and the patient dies. In some of these cases, we observe evident signs of determination of blood to the head, the face is swollen, and the lips livid; there is considerable turgescence of the vessels of the neck, with heat of the head, the skin hot, and the pulse full and strong. In other cases, however, we have a feeble pulse and a cold collapsed state of the surface.

Let us now turn for a moment to the pathology of this form of the disease. I have already mentioned, that the extravasation sometimes occupies both hemispheres of the brain, or that it occurs on one side, and, by tearing through the substance of the brain, gets into the ventricles, and produces symptoms referable to a lesion of both sides. With respect to the simultaneous double effusion, the following is a short notice of some cases taken from the Clinique Médicale of M. Andral. A man, about 37 years of age, fell down near La Charité in a fit of apoplexy. He was immediately brought into the hospital, had prompt and careful attention paid to him, but without any effect; he lay in a state of profound coma, with complete suspension of the phenomena of animal life, and died in an hour and a half. On examination there was a double effusion of blood found in the brain, but it had not got into the ventricles. In another case, marked by simple intensity, there was an enormous effusion discovered in the substance of one hemisphere, which burst into the ventricle, tore through the septum lucidum, and passed into the ventricle of the opposite side. In the next case, no distinct trace of optic thalamus or corpus striatum could be seen, their substance being completely broken up and destroyed by the effusion. I have told you that, after a rupture of the substance of the brain and the escape of the effused blood into the ventricles, persons have not recovered, but it is a fact, and a consolatory one indeed, that a person may recover from a *simultaneous double effusion*. A case in proof of this is given by Andral. A female, who had been for some time a patient at La Charité, died of cancer of the stomach. The history of her case was, that nine years before she had an attack of apoplexy, had fallen down in a state of insensibility, and remained comatose for a considerable time, that this was followed by *paralysis of both sides of the body*, which continued for two years, after which she gradually recovered the use of her limbs. In this case, two serous cysts, such as are met with in cases where patients have recovered from apoplectic attacks, were found, one in each hemisphere of the brain. In another case, the subject of which died of visceral disease, the patient had twenty-two years before an attack of apoplexy with double paralysis, and recovered with the loss of the use of one side; here there were two cysts also found. It appears, then, that though extravasation, with rupture of the walls of the ventricles, and escape of blood into their cavities, always proves fatal, a recovery may take place after a simultaneous double effusion.

Let us now enquire briefly, whether an apoplectic attack, followed by paralysis of both sides of the body, gives sufficient grounds to enable us to make the diagnosis of either of these accidents. Does it follow, if a person has an attack of apoplexy, succeeded by paralysis of both sides, that the effused blood has burst into the ventricles, or that a simultaneous double effusion has occurred? Andral inclines to this opinion as far as I can collect. Dr. Abercrombie appears to differ from him, and gives cases in illustration of his opinions. The following is one:—A private of the 10th Hussars had been complaining for some time of a pain in the head, for which he was blistered, and the pain soon went off. On the 22nd of July, 1819, he was seized with giddiness and fell down; on being raised, he vomited, and complained of violent headach and faintness, but was quite sensible. He was very pale, and his pulse slow and languid. He was brought into Hospital, where he asked for some cold water, made a few inspirations, and expired. From the moment of his last seizure he had been paralytic of both extremities. Here we have an attack resembling the first form of apoplexy, so far as complete loss of power in the upper and lower extremities is concerned, but observe, the *patient was not comatose and retained his faculties to the last.* On examination there was nothing found amiss with the brain, but, on removing the cerebellum, a coagulum to the amount of about two ounces was found under and surrounding the foramen magnum. Here the paralysis appears to have been produced by the pressure of the effused blood on the upper part of the spinal cord. This case is an interesting one. It appears that the injury done to the functions of the life of relation was partial, there was a lesion of the muscular function, but there was no coma, and the intellectual faculties were unimpaired. As far then as a single case goes, we may come to the conclusion, that we are not to make the diagnosis of the first form of apoplexy, unless, in addition to the double paralysis, there are coma and loss of intelligence and sensation. The great points of diagnosis are coma, suspension of the phenomena of the mind, and paralysis of both sides of the body, both of motion and sensation. We now come to consider the symptoms of the second or milder form of the disease. A person falls down in a state of insensibility, but, when you come to examine him, you find that the coma is not so

profound, nor is the paralysis and loss of sensation so complete. The eyes are to a certain degree susceptible of the impressions of light, signs of uneasiness are exhibited when strong pungent odours are applied to the nostrils, and indications of suffering are given if you pinch or burn the skin. All these circumstances prove, that the paralysis of sensation is by no means so complete in this as in the former case. You observe here, too, that instead of the cheeks being puffed out in the manner before described, there is only a partial paralysis of the muscles of the face, *and the mouth is drawn towards the sound side.* The patient, too, instead of dying in a comatose state, gradually regains his intelligence, and is only paralysed on one side, or one extremity. All these circumstances point out that the injury done to the brain is not so extensive, and the occurrence of paralysis on one side shows that the effusion is limited to a single hemisphere of the brain. All this, too, is borne out by pathological anatomy, which shows us, in the first place, that the extent of the effusion is much less, that it exists only on one side of the brain, and never bursts into the ventricles. The general congestion of the head also is much less than in the former case. In the third form, the congestion and other symptoms are sometimes very slight. A person in health may feel a stunning sensation in the head, followed by some thickness of speech and drawing of the mouth to one side, or slight paralysis of one arm or hand, but he has no coma or loss of intelligence, and the paralysis quickly disappears. Every thing connected with the attack shows that it is very slight, the effusion is extremely limited, and this is confirmed by pathological anatomy.

I have now given you a brief sketch of the three varieties of apoplexy, between these you will meet with many intermediate cases.

Let us inquire how far does the circumstance of paralysis point out the occurrence of an extravasation of blood into the substance, or on the surface of the brain; that is, how far we can say that this patient has effusion, because he has become suddenly paralytic. It would appear, that the mere suddenness of the attack will not alone lead to the formation of a certain and accurate diagnosis. You will find in various authors many instances of affections of the head, not of an apoplectic character, in which there was sudden paralysis. Thus, for instance, there are many cases of tumours and encysted abscesses on record in which there was sudden paralysis, and where, if you should pronounce the disease to be apoplexy, you would be certainly wrong. We had lately at the Meath Hospital a remarkable instance of this. A patient, who had been for a considerable time labouring under aneurism of the innominata, in the course of the night became suddenly hemiplegic. On examining the brain post-mortem, there was a circumscribed abscess found in one of the hemispheres, but no sanguineous effusion. If you look to the works of Abercrombie, Rostan, Lallemand, &c., you will find many cases detailed in which sudden paralysis occurred from other causes than apoplexy.

But are there no circumstances, which, combined with the suddenness of the attack, would lead us to form the diagnosis of apoplexy? Now it would appear that, as a diagnostic of apoplectic effusion, *suddenness of paralysis* is only to be relied on where there have been no premonitory symptoms of a local disease of the brain. In the great majority of cases of cerebral abscess, you will find that pains and cramps in some of the limbs, and pain of the head in the situation of the abscess, have preceded for some time the paralytic attack. But if a person in health, without any of these cramps or pains, gets a *sudden* attack of apoplexy, and becomes hemiplegic, you may make the diagnosis of apoplectic effusion with tolerable certainty. The fact of the paralysis, occurring with an apoplectic seizure, renders it highly probable that the case is really one of the hæmorrhagic diseases of the brain. On the other hand, it is true that we may have apoplectic effusions ushered in by symptoms of irritation of the brain; as in the case of an apoplectic effusion occurring in the centre of a softening of the brain. The absence, therefore, of these premonitory symptoms appears to be necessary towards forming the diagnosis of simple apoplectic effusion.

CLINICAL LECTURES ON SURGERY,

DELIVERED AT

THE HOTEL DIEU, PARIS,

BY BARON DUPUYTREN,

PRINCIPAL SURGEON OF THAT HOSPITAL.

Corrected by himself.

(*Continued from page* 721, *Vol. V.*)

Lateral Operation—Improvement of Instruments—Advantages of the Double Lithotomy — Bilateral Operation — Different Manœuvres necessary — Passage of a Lumbricus 11 *inches long from the Urethra—Escape of Gases from the Bladder.*

Case IV.—On the 21st October 1824, for the third time I performed this lateral operation on a boy, named Denis Cintrat, 11 years of age, and who, in other respects, enjoyed good health. Two stones were extracted, one being softer than the other was crushed between the blades of the forceps, the pieces of which were expelled by washing the bladder with injections. Two hours after the operation vomiting came on, which soon disappeared, and the patient continued in a satisfactory condition: no abdominal pains; no shiverings; tongue healthy; and pulse perfectly regular. On the twelfth day inflammation of the wound commenced, and the urine passed through its natural channel, but on the fourteenth it again made its appearance through the wound. On the 27th

of June, six days after the operation, two small pieces of gravel were discovered between the lips of the wound, and on the 3rd of July another small calculus, of the size of a lentil, in the same situation. By the 9th, nearly the whole of his urine was discharged through the urethra; the patient relished his food, and slept well. The wound soon cicatrised, and, in a short time afterwards, Cintrat left the hospital in a state of perfect health.

The inconveniences resulting from the double operation were not a long time concealed from me. In fact, the two most formidable symptoms, ordinarily produced in the lateral operation, by opening the rectum and dividing the pubic artery, are by the latter means prevented. The incision formed by the lithotome is directed parallel to the rectum, and can reach it only in a turgid state of this tube, as we frequently find it in old people, when the instrument must pass its lateral borders, consequently injure it. On the other hand, if this tube was not exposed to this danger, could it not be wounded by the first incision, which is directed from before backwards, and passed perpendicularly very near the anus, and thus, without the greatest care, must evidently wound it? At the same time, it was evident that this first incision would not produce much hæmorrhage; but in the second the internal pubic artery was exposed to the greatest danger, finally, by this proceeding the lateral parts of the urethra are divided, and might easily be lacerated by a rough, or even ordinary sized, calculus; the cellular tissue, surrounding the neck of the bladder, would most probably be bruised, and cause dangerous inflammation; the wound even cicatrises difficultly, inflammation and ecchymosis of the scrotum would also tend to complicate this essential affection, as it frequently happens from incisions, similar to those practised by Marianus.

Bilateral Operation.—I was soon led from reflection and practice to recognise all serious inconveniences, and endeavoured to seek means to avoid them. The greatest danger resulting from the longitudinal direction of the first incision along the raphe, I thought, by making a transverse incision, I should at least avoid wounding the rectum, and prevent inflammation of the scrotum and prepuce, and the most ordinary hæmorrhages. There remained, however, another obstacle; by this means there was difficulty in reaching the bladder, and when the opening was made a voluminous calculus could not be extracted. I then saw the necessity of another kind of incision, but yet, if possible, wished to keep the advantages arising from the transverse. For this purpose I diminished the extremities of the first section, and gave to it a semi-elliptical curvature, the concavity of which faced backwards. Thus the principal difficulty was avoided, as the incision could be prolonged along the sides of the anus as much as necessary for the extraction of the calculus.

Such are the different proceedings that I have pursued in practising the bilateral operation, and this short description will suffice to show you how far, by reflection and experience, you are capable of making improvements.

The instruments used in this operation required also a modification. For this purpose, for the ordinary sound, the volume of which was uniform, and its groove equal in the whole of its extent, I substituted one more hollow and rounded at the extremities of the groove, the middle of which was larger, for about two inches in extent, or at the most curved point of the instrument. In this way it presented in its point, at the place where the urethra was incised, a deep gutter, the edges of which were rounded and somewhat inverted; thus, from its form and length, rendering more easy the section of this canal, and keeping its parietes in a state of distension. The extremity of this instrument was freed from the cul de sac, which so frequently rendered difficult the passage of the lithotome from its groove; finally, the point of this instrument is rounded, which permits it without danger to traverse the different walls of the bladder.

The first incision in the soft parts, made by the ordinary bistoury, or the convex knife of Cheselden, was exceedingly dangerous, in consequence of which I have employed a bistoury, the blade of which is fixed in the handle, and sharp at both edges for the extent of some lines from the point. An instrument thus formed presents more solidity, cuts with more certainty, and divides with great facility the tissues, and moreover, when arrived in the groove of the staff, has the advantage of dividing the urethra both before and behind, without altering the direction of its blade, which in the ordinary bistoury must be had recourse to.

Doubtless the deep parts may be divided, either with the knife or blunt pointed bistoury, by carrying them into the neck of the bladder, and directing their cutting edge successively from right to left. Endeavouring to render as easy as possible the bilateral operation, I incised at first the two sides of the prostate and neck of the bladder; but here, from the regularity of the incisions, the simplicity was prejudiced, as it retarded the cure of the operation, and increased the sufferings of the patient. I believe it then preferable either to the double cutting gorget, or the one invented by Louis, to have recourse to a lithotome, which has in its substance two blades, this, after entering the bladder, forms, by cutting outwards through the neck, urethra, and prostate, a double symmetrical incision.

For the bilateral operation, the patient should be placed and confined in the same position as in the lateral operation. The catheter must be introduced into the bladder, and kept by an assistant in a vertical direction. The right hand armed with a double edged scapel, whilst the left extends with exactitude the perinæal

integuments, the surgeon makes a semicircular incision, commencing on the right side between the anus and ischium, and terminates on the left, at a corresponding point, passing about five lines in front of the anus, circumscribing its anterior part. The instrument successively divides, first, the subcutaneous cellular tissue, the superficial perinæal fascia, and the anterior portion of the external sphincter muscle. The origin of the membranous portion of the urethra is now exposed; the nail of the left indicator finger lies near the inferior wall, also the groove of the catheter, and directs to it the point of the cutting instrument.

During these first steps of the operation, it is necessary to be careful in keeping the inferior lip of the wound downwards with the finger, and prevent the cutting instrument from coming in contact with the rectum.

After having incised the urethra to the extent of some millimètres*, the nail of the left indicator finger, placed in the superior part of the wound, serves as a guide to the lithotome, which, held by the right hand, the thumb below, and the two succeeding fingers above, is presented to the catheter, the convexity of the curvature corresponding below to the anus. The contact of the two metallic bodies being recognised, the surgeon with his left hand raises the handle of the catheter towards the symphysis pubis, and guides the lithotome along the groove in the catheter into the bladder. The catheter is then withdrawn, after which the cystotome is turned, so that its concavity looks towards the anus. Lastly, the surgeon takes the instrument in the ordinary manner, embraces with the right hand the two handles, and withdraws it, not horizontally, but inclining it successively downwards until the blades have entirely escaped.

Immediately after this last incision of the soft parts, the left indicator finger, introduced into the wound, easily penetrates the neck of the bladder, measures the extent of the incisions made, and conducts to the calculus the pincers destined to seize it.

Case V.—C——, a boy eight years of age, was brought to the Hôtel Dieu, May 17th, 1830, to be treated for disease of the bladder. From the account of his friends, I believed him to be attacked with stone in the bladder. He had suffered for a long time, and continually felt a desire to pass his urine, without being able to prevent its discharge. The emission of urine was painful, and became suddenly arrested, and for some time it had passed only in drops; involuntary contractions of the rectum, followed by alvine dejections, and he would frequently, to free himself from pain, extend his urethra. Thus all the symptoms indicating the existence of stone. The day of his entrance in the hospital, I sounded him, and the point of the instrument immediately came in contact with a hard, sonorous body, the noise of which was heard by many who were around. His constitution and age not counter-indicating an operation, I made up my mind to practise the bilateral. This making the twenty-third subject within two years and half that I had performed this operation on, out of which one only had died, and that one from inflammation of the cellular tissue of the lower pelvic cavity.

For some days I had this young patient put upon a proper diet, prescribed for him baths, and emollient ptisans.

On the 23rd, having early in the morning prescribed for him a clyster, I had him brought into the amphitheatre, and placed on a bed, were I again sounded him, and recognised a large calculus. The catheter being fixed, and the scrotum raised, I made, about half an inch from the rectum, a semicircular incision, about twelve lines in extent, incised the urinal canal by carrying the point of the bistoury on the nail of the indicator finger of the left hand, and placed the extremity of the double lithotome (the blades distant about ten lines) in the groove of the catheter, the handle of which was brought forwards, and a jet of urine informed me that the lithotome had arrived in the bladder.

Alvine dejections passed involuntarily during the performance of the operation; but it is right to observe, that he had been attacked with relaxation of the bowels for four years. The lithotome was introduced into the bladder, I opened its blades, and withdrew it, and no hæmorrhage succeeded. By placing the finger in the wound, it appeared narrow, but larger to the left than to the right, the reason of which I will explain to you hereafter. I passed into the bladder without difficulty a pair of small pincers, but discovered no stone; however, I was certain I had previously felt it. After making fequent attempts with the pincers, I seized the stone, and managed to extract it entire. The smallness of the calculus rendered this part of the operation painful, in consequence of its difficulty of detection, nevertheless my little patient bore it remarkably well.

The irregularity of the incision, of which I have previously spoken, shows that the blade on the left side only acted, whilst that of the right remained engaged in its sheath, which was easily perceived as soon as the instrument was withdrawn. The cause of this accident I cannot account to you for; nevertheless, if the stone had been large, many inconveniences might have resulted from it. No hæmorrhage, shivering, or fever ensued after the operation, and the patient slept nearly the whole of the following night. He complained of no pain from pressure on the abdomen, but I perceived some indications of inflammation of the cellular tissue of the pelvis, and, knowing its insidious character, I had eight leeches applied to the perinæum. On the 25th,

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* The thousandth part of a meter, equivalent nearly to half an ancient line.

there was slight amelioration: the next day all symptoms were satisfactory, and on the 28th all functions performed their healthy action; the wound became narrow, and looked healthy. By the 30th, the urine took its natural course; in two days from this time the wound became cicatrised, and the patient left the hospital completely cured ten days from the operation.

Case VI.—C——, 48 years of age, a baker, stated, that in his infancy many times he had difficulty in discharging his urine. This disury, after existing some months, suddenly ceased, without passing, to his knowledge, any stone. Towards the latter end of the year 1832, he became again affected with the same disease, without previously feeling any nephritic pains. The urinal excretion became in a few months frequent and painful, often even incomplete; more than once it was suspended for the space of twenty-four hours; the urine became thick, and deposited a puriform sediment. On the 25th of February, 1826, when he entered the Hôtel Dieu, the fore-named symptoms were excessively severe; every ten minutes he felt repeated desires to pass his water; long and painful efforts preceded the discharge of a few drops of urine mixed with blood, and it was not till the patient suspended his efforts, that the excretion took place. During, but especially after, this excretion he complained of a severe scalding sensation at the extremity of the canal and in front of the anus, also, as the patient expressed it himself, at the neck of the bladder. Frequently his sphincter became powerless, and he passed alvine dejections involuntarily, and, to mitigate his sufferings, exercised tractions on the extremity of the urethra, and made strong pressure on the perinæum in front of the anus.

I sounded him on the evening of his entrance into the Hôtel Dieu, and evacuated from the bladder a large quantity of urine; then, by moving the sound from behind forwards, and laterally exercising a rotatory motion, I felt the shock of a solid body, which became immediately displaced, but, on the second application of the instrument, was felt in the same situation, and I judged it to be of moderate volume and consistence. The next morning, on another examination, the bladder was found to contain a quantity of urine, the stone was recognised by the convexity of the sound almost immediately on arriving at the lower part of the vesical organ. The usual means were employed to prepare his constitution for the operation, and the surface of the perinæum was shaved.

On the fifth, the next morning, the patient was placed in the operating theatre, I again sounded him, and at once discovered the stone. The bladder at this time was distended with urine, and I immediately performed the operation; after which there was a great discharge of black blood, coming from the venous plexuses surrounding the neck of the bladder and prostate gland, but in a short time ceased. I passed the forceps into the bladder, and seized the stone; but, having grasped it in an unfavourable position, I was obliged to abandon it, so as to hold it in another direction; this, without difficulty, I managed, and the calculus was easily extracted. The form of the stone was round, its smallest diameter about ten lines, and its largest more than fifteen. I could discover no other foreign body in the bladder; nevertheless, I had recourse to an injection. The patient was then removed to bed, his thighs half flexed on the pelvis, slightly parted, and supported by pillows. All discharge of blood had ceased.

A few hours after the operation, the patient was seized with slight shivering, which lasted about a quarter of an hour, with darting pain in the right testicle, and in the course of the corresponding cord; but this pain soon ceased, and the patient was only inconvenienced from the pain caused by the passage of the urine through the wound. At eight o'clock in the evening, there was slight febrile reaction, for which I prescribed for him barley water and low diet.

The next morning, after procuring some sleep in the night, the patient complained of no pain, had no unpleasant sensation from pressure on the epigastrium. The urine was discharged entirely by the wound: it was slightly bloody, and his pulse was natural. At eight in the evening his pulse became more frequent, skin was hot, complained of thirst, and pain in the hypogastric region. (Cataplasms, emollient fomentations, and low diet.)

On the 7th, his pulse was slightly accelerated and hard; tongue in the centre coated with yellowish mucus; mouth clammy; still complains of slight pains in the hypogastric, and towards the umbilical region. (Twenty leeches to the perinæum; continuation of emollient fomentations.)

On the morning of the 8th he appeared refreshed by sleep; his pulse still remained quick; the pain in the epigastrium was diminished, but he complained of others in the testicle, and in the course of the right spermatic cord to the inguinal ring. These pains were neither accompanied with swelling nor redness, but were increased from pressure, and prevented him from sleep. (Cataplasms; fomentations.)

About six o'clock in the evening, he was attacked with much heat in the urethra, and discharged by this passage a few drops of urine. (Cataplasms to the scrotum; application of suspensory bandage; syrup of poppies, 3j. h. s. s.)

On the 9th, felt a sensation of nausea, accompanied with pains in the epigastric region, tongue thickly coated with mucus, and complained of pain in the forehead. Since the operation he has passed no stool; pulse not full, but more frequent than natural; urine in small

quantities continues to pass through the urethra. (A clyster; drinks slightly acidulated.)

10th. During the night he passed an alvine dejection, his pain in the head ceased, mouth less clammy, and his tongue more clean; pains subsided; urine discharged entirely through the wound.

On the 12th the patient experienced some gastro-intestinal symptoms, but otherwise no signs of inflammation. (Castor oil.)

13th. The patient has passed many alvine evacuations; slight fever, with colicky pains; but these symptoms were soon dissipated. (Barley water.)

15th. All the symptoms subsided, his tongue became clean, pulse natural, and abdominal pains ceased; urine passed partly through the wound, and partly through the urethra; suppuration commenced in the former, and its size gradually decreased.

By the 20th, at least two-thirds of the urine was discharged through its natural passage, and in health he felt perfectly well.

From this time to the 25th the wound continued to contract, and permitted only the passage of a few drops of urine; and, by the 30th, the urine passed entirely through the urethra.

Case VIII.—The patient named S——, 46 years of age, of sanguineous temperament and good constitution, was admitted into the Hôtel Dieu, Sept. 5, 1829, for symptoms of stone in the bladder, and stated,—since the age of seven years he had felt pain in discharging his urine. Towards the age of twelve he became subject to hæmaturia; this disposition continued for many years, and the blood was more frequently discharged after taking exercise. At thirty years of age he again became tormented with pains: they became acute and lasting. A calculus was now detected in the passage of the urethra, which was extracted by making an incision about an inch in extent along the median line of the gland. The pains ceased, and, until he had arrived at his forty-first year, he enjoyed tolerable health. At this time new symptoms supervened; disury; jet of urine frequently interrupted; purulent deposition. From time to time small calculi were discharged, causing an exacerbation of excessive agony; and in the space of four years, between fifty and sixty he passed by the urethra. Two months previous to his entrance into this hospital he discharged another, formed probably in the urethra. At this period some fœtid gases escaped from the urethra with a noise, and erection of the penis. The noise was sometimes so loud as to awaken his wife.

Finally; one month only previous to his entrance he passed through the same passage a white lumbricus of eleven inches and a half in length, which circumstance caused me to believe there existed a communication between the urethra and rectum.

On the 5th of September he entered the Hôtel Dieu; the pains continued in spite of the expulsion of the last calculus; he had no hæmaturia, and the discharged urine was always purulent and fœtid. Frequent desires to pass his urine; in fact, all rational signs of stone existed. I sounded the patient, and assured myself of the presence of a calculus. The genital organs were moderately developed, and his general health was tolerably good.

The constitution of the patient was prepared for the operation by the usual means, and, on the 14th, he was brought into the operating theatre. The existence of the calculus was again ascertained; the catheter was introduced into the bladder, and held by an assistant in a vertical direction; the integuments of the perinæum extended by my left hand, with my right I made a semi-elliptical incision eight or nine lines from the anus. The lithotome opened to No. 12. The urine discharged through the wound; the stone, which was not large, was seized in the second attempt, and broke, and the pieces were extracted. No hæmorrhage supervened; two injections were passed into the bladder, after which the finger was introduced, but no other foreign body could be detected in the bladder.

The patient was carried to bed; complained of slight pain in the epigastric region; and in about an hour and a half from the operation shiverings supervened, which lasted about three quarters of an hour. A few hours later these symptoms again returned; urine tinged with blood, which is discharged partly through the wound and partly through the urethra. About six o'clock in the evening he complained of violent pain in the head (bleeding), slight inflammatory symptoms ensued. From this time to the 19th, nearly the whole of the urine was discharged through the urethra: its smell was very fœtid, and resembled that of fæcal matter: its colour was yellow, and mixed with purulent mucosities. I prescribed for him six pills a-day, composed of the following:—

Venice turpentine .	. 40 grains,
Acetate of lead .	. 4 grains,
Extract of white henbane	6 grains.

Eight days after taking these pills his urine became less fœtid, and its mucous deposition was less; but colicky symptoms supervened, and relaxation of the bowels ensued; consequently the pills were omitted.

Nevertheless the dimensions of the wound continued to decrease, and permitted only a few drops of urine to be discharged. The pills were again administered; and towards the latter end of October he was discharged from the hospital. The wound completely cicatrised, but the urine remained thick and purulent.

A CASE OF HEPATIC ABSCESS, IN WHICH TAPPING WAS PERFORMED BEFORE ADHESION OF THE LIVER TO THE SIDE HAD OCCURRED, AND THE APPEARANCES AFTER DEATH.

BY W. E. HORNER, M.D.
Professor of Anatomy in the University of Pennsylvania.

ROBERT MILES, tax-collector, a respectable and valuable citizen, aged fifty-four, a short, stoutly-built man, whose habit of body had been impaired by previous attacks of sickness, occurring at distant intervals, and by hæmorrhoids, was seized about the 1st of December, 1832, with symptoms of dysentery, which disappeared under treatment by Dr. Chapman and myself in sixteen days. They seemed to be connected with an elastic tumour of an inch in diameter, in the linea alba of the epigastric region; this tumour was taken for a hernia of the stomach or colon, and having diminished much as he convalesced, got entirely well in a few weeks afterwards.

On the 25th of May, 1833, he suffered from an attack of colic followed by diarrhœa, and the bowels continued loose and irritable for some time.

July 18th, being in the country for the recovery of his health, he was seized with severe pain in the epigastric and right hypochondriac regions, attended with fever, and came under the professional treatment of Dr. Vandyke, to whom I am indebted for the following statement:—

"Dear Sir,—On the 19th of the month of July 1833, I was requested to visit Mr. Miles at the residence of his son-in-law, Capt. Robinson. The general appearance of the patient evinced debility and emaciation of body. The complexion pale and sallow, pulse frequent and feeble, coldness of the hands and feet, indicating a disturbed balance of circulation. He complained of an obtuse pain in the right hypochondriac region, sense of fulness after eating, but could lie on either side without any sensation of weight or dragging, from which I inferred that no morbid adhesions then existed; had no cough; appetite diminished, and digestion imperfectly performed; slight and irregular chills were felt through the day, and a febrile paroxysm occurred every evening, terminating in profuse perspiration. Tongue slightly furred; sleep disturbed; biliary secretion vitiated; stools frequent, exhibiting a frothy, yeast-like consistence, of varying and unnatural colour. An examination of the body discovered an enlarged and indurated state of the liver. The nervous organism was not materially affected, and the mental energies and spirits were unimpaired.

"A careful consideration of these symptoms led me to the conclusion, that the patient at that time laboured under an hepatic obstruction and chronic enlargement of the liver. The indications of treatment, deduced from these morbid phenomena, were the reduction of the periodical febrile excitement, and the removal, if possible, of the hepatic obstruction and induration. These were attempted by external frictions and irritative applications over the region of the liver, and by mercurial remedies, &c. He was ordered three grains of calomel at bed-time, with a tablespoonful of the expressed juice of taraxacum on the following morning, to be taken every second night, and to use daily frictions of a wash, impregnated with resinous fumes upon the right hypochondrium, with mustard applications. During the febrile paroxysm he was directed to take forty drops of sp. nit. dulc. every two hours; and the occasional use of mustard sinapisms to the extremities. Diet abstemious, light, and of easy digestion. The pursuance of this treatment, slightly varied according to circumstances to the 13th of July, was attended with some advantage. The febrile paroxysm and night sweats ceased; the appetite was somewhat improved; the strength increased; the evacuations were more natural in appearance, but still too frequent; and the enlargement of the liver remained unchanged. A cretaceous julep was now ordered in occasional doses as the state of the bowels required, and a seton recommended.

"It was at this date proposed to Mr. Miles by some of his friends to try a trip to the sea-shore, as his strength was improved. To this proposal, upon being consulted I consented, desiring him to continue the remedies during his visit, and to return immediately should it not agree with him.

"I did not see him again until about the 20th of August, when I received a visit from

him at my house for the purpose of obtaining further advice. He seemed evidently benefited in appearance and strength. A continuance of the remedies was advised; substituting for the calomel grs. iij. of mass. hydrg. and the extr. taraxac. for the fresh juice. The seton was again recommended.

"With sentiments of the highest respect,

"I am your friend,

"F. A. VANDYKE."

"*Hawthorn Cottage, Oct.* 14*th*, 1833."

August 25th.—Mr. Miles had a renewal of his attack of hepatitis: a considerable tumefaction of the right side was apparent, attended with extreme pain. The ordinary depletory remedies were resorted to by Dr. T. Harris, who, in consequence of my being from town, was kind enough to take charge of the patient. He was leeched on the side freely; a blister plaster was then applied, and the blistered surface kept open; it being dressed occasionally with morphia to diminish the intensity of the pain which shot down from the liver to the right iliac region. The administration of blue mass with morphia was also instituted; the mass being given to the amount of two grains daily.

On the 2nd of September I resumed the charge of the patient, and continued with but little interruption the treatment which had been instituted by Dr. Harris. The descent of the liver below the right margin of the thorax amounted at that time to three or four inches, and it formed a very conspicuous indurated swelling. About the 20th, fluctuation was perceived, and became each day afterwards more distinct. Occasionally excruciating paroxysms of pain came on, which were generally relieved by an opiate. The patient in the meantime evidently declined in health, and became subject to exhausting perspirations. Under these circumstances, we looked anxiously for the spontaneous evacuation of the abscess through some of the common routes for such matter, but, being disappointed in this, the expediency of operating through the side was suggested, as it was clear that death must come in a short time without relief. The great objection to the operation was, however, ignorance of the fact, whether an adhesion had formed between the liver and the anterior side of the abdomen, and, if this were not the case, the unavoidable risk of opening the cavity of the peritoneum, and the probability of some of the matter of the abscess running into it and producing inflammation.

The case being in this unpromising condition in every view of it which could be taken, a choice of evils only was left; and with the consent of the family, and the advice and assistance of Dr. Harris, the operation was undertaken Oct. 1st. An incision was first of all made horizontally on a line with the anterior end of the eighth rib on the right side, a little in front of its cartilage, and through the side of the abdomen, which brought the liver into view; the latter was seen to rise and fall with the diaphragm in respiration; morever, a knife handle was introduced between the surface of the liver and of the contiguous part of the abdomen; these two facts made clear the thing apprehended, to wit, want of adhesion. In this dilemma I determined to stitch the liver to the side, which was accomplished with a large crooked needle, armed with a ligature of kid skin, and of bulk sufficient to fill up the hole made by the needle. One stitch was made in this way parallel with the upper margin of the incision at the distance of four lines from it, and another in the same manner below. The liver being thus fixed closely to the side, a trocar and canula were plunged into the abscess, and five gills of purulent matter were immediately discharged to the great relief of the patient; the matter continued to flow during the night, so that three or four more gills were discharged. The operation being ended, a bandage was put around the abdomen so as to keep its viscera as still as possible. The canula was left in for fifty-four hours, and then a piece of a flexible catheter was substituted. The abscess discharging all this time small quantities of pus and serum mixed.

On the second day the bowels became tympanitic, and there was hiccup, with colicky pains. On the third day there was a manifest declension of strength, and it became evident that the previous exhaustion of the patient must render the operation nugatory. The symptoms of debility increased, and the patient died on the 5th inst. No sign of peritonitis followed this operation.

In twenty-two hours after death an exa-

mination was made. A recent adhesion between the liver and side had occurred immediately around the puncture of the trocar, and which along with the stitches had prevented any pus from getting into the cavity of the peritoneum. The latter membrane was entirely sound, and had no appearance of being irritated by the operation. The cavity of the abscess was collapsed very much, and contained sheds of coagulating lymph mixed with pus, amounting in all to about one gill; its parietes were lined by a membrane. The right lobe of the liver being the seat of it, the anterior half was gone, but it appeared to be rather by pressure and absorption than by dissolution, as no remains of the liver were seen in the discharges. There was no preternatural adhesion of the liver to the parietes of the abdomen, excepting what was made by the operation. The left half of the stomach was destitute of mucous coat, it having been dissolved completely, so as to exhibit the cellular coat naked. Six inches of the beginning of the colon were studded with ulcers having red, injected, and elevated edges. The small intestines were sound.

Though life was not saved by this operation, evidently owing to the exhaustion of the patient at the time of its performance; I yet consider it as illustrating the fact, that hepatic abscess may be managed by opening it, even when adhesion to the side has not occurred, provided the liver be secured in the way described, or by an equivalent process; and, after a deliberate review of the case, I only regret that I did not resort to this treatment when the abscess first fluctuated.

CASE IN WHICH SAND WAS VOIDED BY THE MOUTH, RECTUM, URETHRA, NOSE, EAR, SIDE, AND UMBILICUS, AND ATTENDED BY VARIOUS OTHER ANOMALOUS SYMPTOMS.

BY C. TICKNOR, M.D., OF NEW YORK.

Miss Lucy Parsons, of Egremont, Berkshire county, Massachusetts, when about eleven years of age received an injury by the fall of a barrel across her loins, which was followed by exquisite pain, and an almost total loss of the power of locomotion. The pain after a time subsided, and the ability to walk gradually returned, though partial paralysis of the lower extremities, accompanied with severe pain, would almost immediately recur after much exercise. This state continued till about seven years after the receipt of the injury, when some portion of the surface was attacked with an erysipelatous inflammation, which, by metastasis, fixed itself upon the abdominal viscera. The patient now suffered excruciating pains, particularly of the right lumbar region, together with all the various symptoms of diseased stomach and bowels, was unable to walk, and mostly confined to her bed, till I saw her in the autumn of 1831, more than twenty years after the attack of erysipelas.

My brother first saw the patient in consultation with her attending physician: he found her labouring under a profuse diarrhœa, which threatened a speedy termination to all her sufferings; food would pass in *ten minutes*, to all appearances precisely as it was taken into the stomach, without smell or change of colour. At this time a few grains of calomel put a stop to the diarrhœa, and the patient remained one hundred and nine days without any fæcal evacuation *per rectum*. The most active cathartics had no other effect than to cause pain and irritation of the bowels, and a vomiting of their contents. An injection thrown into the rectum would be vomited in a few minutes, having the same appearance as when administered, and free from any admixture of fæces. During this period of one hundred and nine days the patient experienced a regular vomiting each day of the food, properly digested, which she had taken the preceding twenty-four hours. About this time there was something of a peculiar appearance in the matter vomited, which, on washing, proved to be *sand;* and on examination it was found that sand was also discharged with the *urine*. The bowels resumed their office, and it now became the turn of the bladder to have its contents expelled by vomiting; the patient experienced a strong desire, without the ability, to pass the urine by the urethra; and, on trying to introduce a catheter, the passage was found occupied by a hard substance, which rendered the operation impossible. The urine was now vomited for several days, though it occasionally passed *per rectum*, mingled with sand, till a quantity of sand stones, or lumps of concrete sand, were

discharged from the urethra, when the urine again flowed through its proper channel.

The pain continued unceasing in the right side; a small abscess formed, which, being left to itself, opened and discharged, with a small quantity of pus, several lumps of sand; and, in the efforts of vomiting, fæces escaped through the same opening.

June 8th, 1832. No fæcal evacuation from stomach or bowels in *forty days;* has taken a great deal of cathartic medicine; vomited her urine; vomited injections in fifteen minutes after being administered, without the least appearance of any fæces; appetite pretty good, though she takes but little food; tongue of an *inky* blackness, except the edges, which are *red;* complaining of excessive pain in right side and stomach; said she can feel lumps of sand moving inside; sand passes through the external opening in the side, mixed with blood, and sometimes fæces; has had spasms of the muscles about the throat and jaws.

13th. Pain very great; jaws spasmodically closed; mouth filled with lumps of sand, several pieces passed out at the nose; saw her eat some bread and milk, and in a very few minutes it passed out at the opening in the side; tried to introduce a probe into the orifice, but could not succeed; could feel the sand in the side.

14th. Received a note from the patient's brother, stating that his sister this morning passed by stool, *at one sitting, forty-four lumps of sand.*

25th. The lumps of sand, discharged on the 14th, vary from the size of the fore-finger to the first joint to that of a small pea; no fæcal evacuation from stomach or bowels since last date; for the first time during her illness, she has since last visit vomited purulent matter, and voided it by stool.

July 19th. Received the following account from the patient's sister of her state since last visit. On the 6th inst. her jaws became spasmodically closed; bowels for three succeeding days regular, since then no discharge per rectum; regular vomiting once a day of fæcal matter, which is quite fluid, and escapes between the teeth; 8th, right ear began to bleed; 12th, discharged a watery fluid resembling urine *with sand.*

30th. An abscess opened just above the symphysis pubis, and discharged a small quantity of pus, afterwards *urine mixed with sand,* which continued for a week. Present symptoms—appetite pretty good; takes liquids, which she sucks between her teeth; jaws being yet firmly closed; vomits fæces every day, the fluid part escapes between the teeth, and the more solid part is again swallowed; has lumps of sand in her mouth, which have been there *eleven days;* a dose of tartar emetic caused a little relaxation, and the mouth was emptied; at this visit I saw her vomit her urine, one gill, perfectly transparent, as if just passed by the urethra; saw a teaspoonful of fluid discharged from the ear with sand, and a lump of sand from the nose; sleeps little; suffers exquisite pain; another abscess seems to be forming in the right side; more emaciated than I have seen her at any period of her illness.

August 1st. Jaws yet closed; vomits, or passes by stool every few minutes, a whey-like fluid; retains *very little* food; since last visit voided by stool at once a tablespoonful of sand with a teacupful of pus, and soon afterwards there was discharged in the same way a membrane-like substance, of the size of a crown-piece, containing a number of fine, delicate hairs; there is voided now sand and urine by the mouth, rectum, urethra, nose, ear, side, and umbilicus! Treatment—Nit. argent. grs. x., op. xv., ft. pil. xx., one every fourth hour; foment abdomen, side, and throat, with a decoction of cicuta.

13th. Symptoms of same character, though much mitigated in violence. Continue the same treatment.

September 1st. No diarrhœa; some vomiting; pain of the left side; no discharge of sand since last date; deaf with right ear; vomits urine occasionally; for two weeks has been troubled with spasms resembling epilepsy, has twenty or more in a day, is warned of their approach by pain in the epigastric region; left leg is strongly flexed upon the thigh, heel drawn up and lying upon the glutæi muscles, and has been so for twelve days; appetite good, but most of the food is rejected soon after eating. Take the following pill every fourth hour—Ext. hyoscyami, grs. iij., castor, grs. ij., nit. argenti, gr. i.; laud. and ext. cicuta between the pills in quantities sufficient to procure sleep or quiet; foment spine, side, and epigastrium, with decoct. cicuta.

10th. No spasms since last date till to-day; omitted the pills yesterday, and to-day the spasms returned; no natural evacuation from bowels or bladder since 20th July; contents of both are vomited; appetite tolerable; has ridden out several times since last visit; left leg continues flexed. Treatment the same.

October, 1833. Have not seen the patient for more than a year: her sister gives the following account of her condition during that interval. Her bowels soon became quite regular, and so continued for some time, then relapsed into their former obstinately costive state, when their contents have been vomited; appetite has been generally good; left leg during the whole time has continued flexed, and attempts to extend it have invariably caused frightful spasms; has ridden out frequently, done a good deal of needle work, and may be said to enjoy comparatively good health. I ought to add, that during the whole illness of this patient her catamenial evacuations have been generally regular, though at times rather profuse.

A lump of sand discharged from the bowels, which Dr. Torrey and Dr. C. A. Lee, of this city, had the kindness to analyse for me, proved to consist of silex and lime, and a few *short hairs;* the former making much the greater proportion. Professor Averill, of Shenectady, did me the same favour, with the same result.

Most of the facts related in the above case, besides being witnessed by my brother, Dr. L. Ticknor, of Salisbury, Conn., and myself, can be vouched for by the following gentlemen. Dr. Bolton, of Egremont, Dr. Kellogy, of Sheffield, Dr. Wheeler, of Great Barrington, Professor Averill, of Union College, Drs. Cleaveland and Flallenbeck, and Mr. Oliver Whittlesey, of this city.

The interesting features of this case will readily suggest themselves to the mind of every reader. It furnishes an extraordinary example of the amount of disease the system can sustain when nature is playing her wildest freaks.

In regard to the imposition which the patient practised, or at least *might* have practised, I may state that she has sustained a character for genuine piety, and to have lived with her two maiden sisters who have had the sole care of her for more than twenty years; they had a small estate, which, with frugality, would support them all, and there can be no reason why she or her sisters should wish to deceive. I have hesitated about publishing the case, but I believe it a duty I owe to my profession not to withhold the facts, however they may be accounted for, or however little they may be believed. I have thought best to give the facts and the facts only—the patient is still living about fifteen miles from where my brother is practising, and he may yet detect her in her imposition if she is not put upon the look out by publishing speculations prematurely. Can these phenomena be accounted for without calling in the aid of imposition?—*American Journal of the Medical Sciences.*

Foreign Medicine.

Chorea in Children.

BY M. RUFY.

Out of 32,976 children, admitted into the Hôpital des Enfans (17,213 boys, and 15,763 girls), during ten years (from 1824 to 1833), 189 were affected with chorea, amongst which were observed 51 boys, and 138 girls. Contrary to the general opinion of authors, in the preceding number the disease was observed as frequently from 6 to 10 years, as from 10 to 15. In a table published by the reporter, we observe the disease attacking, from 6 to 10 years of age, 16 boys and 45 girls,—total 61; and from 10 to 15, 30 boys and 88 girls,—total 118. Feebleness of constitution and fright are the only well founded predisposing causes which influence the development of this affection. We have never observed in the Hospital of Children the disease transmitted by imitation. Out of 25 cases of chorea, we have seen it 9 times *general,* that is to say, occupying the superior and inferior extremities, the trunk and face. Five times it occupied the two superior limbs, the inferior not in the least partaking of the disease; five times the extremities of the left side, once the right; four times the left arm, once the right. In the cases of *general* chorea, twice out of nine cases the movements of the left side were more pronounced than the right. These results fully confirm the opinion of many authors, viz. that this affection more frequently attacks the left side. It has never been observed in this hospital to have

affected alone the inferior extremities. The muscular agitation in general abates during sleep.

The length of time in the hospital, calculated from the above 189 cases, before the agitation is checked, has been about 31 days.

When chorea is chronic, that is to say, when it is indefinitely prolonged, its attack is generally partial, and the patient attacked is liable to a relapse. In the majority of cases, it exists without any complication, and more particularly without fever. It is seldom we have an opportunity of examining the anatomic lesions after chorea. In four cases observed by the reporter, the results of the autopsies have been negatory. Also in two other cases, which were communicated to him, no organic lesion could be detected, either in the encephalic substance, in the spinal marrow, or in their membranes. The affections that caused the death of the four observed by M. Rufy, are, for the two first, measles, peritonitis for the third, and, finally, chorea for the fourth. In this last, death appeared to take place from asphyxia. The reporter of the above facts also names, that M. Guerunt has had more opportunities than any one of seeing children die from this affection alone, without any functional alteration, and by only an exasperated state of motility. In every case, death was speedy, and the symptoms at last were adynamic. Can we not suppose, that in these subjects death originated from the loss of nervous fluid, as in certain severe operations we observe patients die from pain?

MR. DERMOTT ON HOSPITALS AND DISPENSARIES.

To the Editors of the London Medical and Surgical Journal.

Gentlemen,—As the following observations refer to actual facts, your impartial liberality as Journalists will permit "a free discussion" of the important topic to which they allude. It is with some astonishment that I perceive you dispute the opinion which Lord Brougham expressed regarding Hospitals and Dispensaries.

The quotation, which you make from his Lordship's speech, was not intended by the speaker, I should presume, to depreciate the charitable principle of disinterestedly bestowing medicines and advice to the sick poor, but evidently refers to the present abused state of those establishments; we full well know that no charities are prostituted more than hospitals and dispensaries; the glaring abuses in them are every day getting more and more palpable to the reforming community at large.

"Such hospitals as Guy's and St. Thomas's are, in the strict sense, useful" as real charities "so far as they are open to accidents," because accidents, and accidents only, are admitted without private patronage, or "letters of recommendation." These letters are a species of mock charity, which ought, for the credit of England, to be abolished. The use made of them by the majority of the Governors, entitled to them by their subscriptions, is to farm their domestics and servants, or those of their friends and customers, upon the institution. Very many of these letters, consequently, do not reach the hands of those absolutely poor.

In corroboration of this we frequently hear medical practitioners declaring how much these charities, so called, are abused by the many affluent masters of families sending their servants and dependents to these places, when they ought, as a matter of propriety, to call in the household medical attendant. General practitioners more especially complain loudly of the degree to which their practice is unjustly curtailed in this manner. Besides, as the "letters of recommendation," which each Governor is empowered to give, are very limited in number, should he not recollect, that, by employing one in behalf of a domestic, advice for whom he can well afford to pay for, he is diminishing in the same ratio the number of those absolutely poor that can be relieved by the institution. Do we not know that it is perfectly possible for a poor sick person, we will say with pleuritis or phthisical symptoms, to campaign through wet for days after a "letter of recommendation," and perhaps not succeed in obtaining it after all, or if he does, the complaint is probably so increased by this "letter-of-recommendation-hunting," as to terminate fatally. This petty patronage exists in the highest possible perfection, both in hospitals and dispensaries. It alone is suf-

ficient to demand medical reform, and a remodelling of our leading medical charities, but it is unfortunately only a portion of the vast system of favouritism which exists in them; for when we cast our eye upon the mode of electing medical officers, the scene is too disgusting to bear a comment.

The patronage, which the subscribers purchase by their subscriptions, is a system of dishonesty towards the profession, inasmuch as it must sometimes exclude abler men, (as aristocratic patronage, family influence, and merit seldom go hand in hand;) it is a system of dishonesty towards mankind at large, for it damps the ardour of genius and unaided talent, instead of exciting it in favour of the welfare and health of the community; it is a system of dishonesty towards the sick, inasmuch as it possibly deprives them of better treatment and perhaps ultimate recovery.

In consequence, too, of the petty contending influence and views of Governors, party strife is engendered, this begets envy, dislike, and discord, and the welfare of the sick is forgotten. Thus all the hospitals and dispensaries in the metropolis are more or less an arena for verbal warfare, which rends them in twain to their very foundation, instead of being asylums of peace and pure charity for the really indigent sick.

These facts alone show the necessity of the leading medical charities being placed under Government's control, and made perfectly national; were this done in a few instances all the others would be obliged to adopt a better and an improved system.

I am, Gentlemen,
Your obedient servant,
G. D. Dermott.

35, *Dean-street, Soho.*

DERMOTT'S ANATOMICAL PLATES.

To the Editors of the London Medical and Surgical Journal.

Gentlemen,—As a vast number of medical practitioners, particularly in the country, have been imposed upon by having spurious and inaccurate plates put into their hands, which they have purchased, supposing them to have been mine, I beg leave to refer your numerous readers to the advertisement on the cover of this Journal, and to make a few comments upon it in order that none of them may be again imposed upon. It is true I have only published Parts 1—Head and Neck, 2—The Thigh, and 3—The Leg; consequently, Parts 4, 5, 6, and 7, fraudulently sold as mine, are not so; nor did I ever behold them until they were sent to me by subscribers for inspection, who apprehended the imposition in consequence of the "falling off" of the plates, and the rapid manner in which they were produced.

I certainly have not brought out the numbers so expeditiously as I at first anxiously anticipated, and that principally in consequence of my having been so unprecedently badly supplied with subjects for dissection during the commencements of last summer and winter, in consequence of the very unjust and partial manner in which a defective anatomical bill then continued to be exercised. I still, however, preferred accuracy to sheer dispatch, determined to draw and lithograph every thing myself from nature.

This is certainly no excuse for the person or his agents complained of to me by a great number of my subscribers and readers of your Journal, who bought numerous copies of my first numbers, and sold plates, as mine, of which I had no knowledge whatever, nor any excuse for himself or his agents having falsely stated to numerous subscribers, as appears by ample evidence, that they were a continuation of my own series; and for his having actually enveloped many of the false plates, so sold, in wrappers with my name printed upon them as the author. This forms one of the grossest acts of fraud that ever an unfortunate author was subjected to: it is a *limited* fraud committed upon each subscriber, but a most *extensive* one against my pocket and professional reputation, owing to the complaints as to the style and inaccuracy of the spurious plates before the system of theft was duly discovered.

Regarding the manner in which I intend to acquit myself toward the various subscribers, I beg to state that, being now blessed with a more impartial exercise of the anatomy bill, as to a more equitable supply of subjects for dissection under the direction of that able statesman, Lord Melbourne, I shall rapidly complete the accumulation of material for all the forthcoming parts (eight in number), for

the purpose of expeditiously finishing them on stone, and publishing them simultaneously, or nearly so, to prevent the repetition of similar frauds and plagiarism.

As a caution, I would particularly state, that no plates are mine unless they have my own *written* signature at the bottom, besides my printed name; and unless they have enclosed within them, not only a prospectus of my lectures, but a printed copy of two parliamentary petitions,—one referring to concours, the other to the anatomy act,—and that the agent's name whom I now employ is Mr. Dawson, who has a written voucher with him to that effect.

My loss having been considerable, and my duty toward my subscribers rendered by these unforeseen occurrences more arduous than I expected, I sincerely hope that, notwithstanding they have been so imposed upon, they will have the liberality and good feeling to continue to me their support, and enable me to fulfil my engagement with them, by taking in my own plates as soon as published. As I have no list of subscribers in my possession, it is desirable that those who wish to complete the series would transmit their address to me without delay, in order that they may be duly furnished with the remaining numbers.

I am, Gentlemen,
Your obedient servant,
35, *Dean-street, Soho.* G. D. Dermott.

FEES AT CORONERS' INQUESTS.

To the Editors of the London Medical and Surgical Journal.

Gentlemen,—The following copy of a letter, addressed to Mr. Warburton, on the subject of remunerating medical practitioners for attendance at Inquests, is at your service, if you think it sufficiently important for insertion in your excellent periodical.

I am, Gentlemen,
Your obedient servant,
J. Aaron.

To Henry Warburton, Esq., *Chairman of the Committee on Medical Education, House of Commons.*

Sir,—I have read in The Medical and Surgical Journal a copy of a letter addressed to you from Mr. Hetling, of Bristol, in reference to which I take the liberty of troubling you with some remarks.

It is certain that there is no provision made by any Act of Parliament for remunerating the medical witnesses at Inquests; and as the fees we were accustomed to receive in this part of the country have been lately diminished by the determination of the parishioners in vestry, who may, if they please, refuse any remuneration whatever, the question has been mooted among the profession, whether or not the coroner has the power of *compelling* them to examine bodies and give evidence thereon at Inquests; and it has been said, that a medical practitioner can be compelled by the coroner to give evidence *only as a common* witness; but that, if any question is put to him involving a *professional opinion*, he may decline answering it until he has received a fee. I have made some inquiry among my *legal* friends upon this point, and their opinion is, that a coroner cannot compel any surgeon to examine a body and give evidence thereon at the Inquest; but, if a surgeon, having examined the body at the coroner's request or not, comes before that functionary, the latter may commit him for contempt if he refuse to answer any question put to him relative to the case before the jury.

During the passage of the New Coroners' Bill through the Lower House, our worthy and respected representative, Mr. Scholefield, attempted (at my suggestion) to introduce a clause for legalising the fees to medical witnesses at Inquests, but was so far from succeeding in his kind endeavours, that he has reason to believe, that if he had pressed his proposed amendment to a division, the clause which now forms part of the Bill would also have been negatived, for which *I* should not have been sorry; indeed, I am convinced that the majority of respectable practitioners would prefer remaining as they are, to *enjoying* the operation of that clause.

Mr. Hetling proposes that the Bill should "*empower* all coroners to issue a compulsory summons to the overseers of the poor, or other persons having the management of the poor rates, to provide for the attendance of a surgeon upon every Inquest, for the purpose of examining the body, or to give evidence, and to defray the expences from the poor rates."

I object to this plan for the following reasons:—first, that by placing the nomination

of the surgeon in the "overseers or other persons having the management of the poor-rates," a system of monopoly and favouritism would be introduced, unjust to the profession generally, and subversive of the purpose for which such inquiries are instituted; for those persons would naturally choose either the parish surgeon or their own medical attendants, while the other members of the profession in the place would be obliged either to refuse to go when called to cases of inquiry or sudden death, and thereby lose patients and get an ill name, or be content to have what is, in *many* cases, their *only* remuneration taken out of their hands by the medical friends of the overseers; and secondly, because Mr. H. has not proposed to fix the *amount* of the fees, which, in justice to the profession, upon whose time these cases are a serious tax, and upon whose knowledge the return of a true verdict so much depends, should be liberal.

Should the Committee over which you preside take this subject into consideration, I would respectfully suggest, that as the surgeon who is first called to a case requiring judicial investigation is the most proper person to give evidence thereon, no enactment is necessary to insure the attendance of respectable practitioners, if a fair remuneration for the exercise of their skill and their loss of time is *secured* to them by law; and therefore, that the coroner should be *required*, immediately after every Inquest, to make an order (which should be imperative) on the overseers or other persons having the management of the poor rates, for the payment of certain fees to the medical witness, or to each of the medical witnesses, where more than one are examined; the amount (which should be *fixed* by the Act, not *merely limited*) being more or less, according as the coroner may or may not have required a *post mortem* examination of the body.

If this were done the profession would be so far satisfied, the public would have no cause to complain, and the ends of justice would be more surely effected.

I remain, Sir,

Very respectfully, yours,

ISAAC AARON, M.R.C.S.

Birmingham, July 16*th*, 1834.

HYDATIDS OF THE KIDNEYS PASSED BY THE URETHRA.

ELIJAH JONES, æt. 27, a comb-maker, of pale complexion and slender form, applied to Dr. Duncan on the 13th of May. He brought with him several portions of a membranous looking substance, having a pearly, semi-opaque, pulpy appearance, and which he said he had passed with his urine three days previously. He stated that he made water rather oftener than usual, and sometimes with difficulty; and that he had a constant shooting pain in the perinæum, which was increased after micturition. He had also occasionally a sense of weakness in the right lumbar region. Urine of natural appearance, and functions natural.

On examining the substances above-mentioned, one was discovered of a globular shape, and about an inch and a quarter in circumference, evidently an hydatid of the genus Acephalocyst. It was filled with a transparent fluid, having floating in it another very small hydatid, which gravitated in the surrounding fluid. The remainder of the substances consisted of the coats of seven or eight hydatids which had burst, and which, when filled with water, varied in bulk from the size of a pea to that of a pigeon's egg.

He stated, that seven months ago he got a bad cold, and suffered from pain above the right hip, and in the perinæum; and that, five months ago, a blister was applied, which removed the pain above the ilium, but that he still feels occasional uneasiness there. About a month ago he passed several hydatids, which caused some obstruction to the flow of urine, but no more appeared until three days ago, although during the last month he has had constant pain in the perinæum, apparently near the neck of the bladder. He was ordered to take diluted muriatic acid, 12 minims three times a-day.

16th. Another hydatid has been passed (burst). The pain is nearer the end of the penis.

24th & 25th. Two more hydatids passed, which obstructed the urine for some time. No pain in the perinæum now; it is generally felt six or seven hours before the hydatid is expelled.

June 3rd. No more hydatids have appeared. Complains only of weakness in the back and hip.

The above case is interesting from the extreme rarity of its occurrence. Dr. Craigie says, that "the uterus is the only cavity, with mucous surface, in which inspection shows that hydatids have been found;" and there can be no doubt that, in this case, they were formed in the kidneys, and probably increased in size after their descent into the bladder.

The following account of the *post mortem* appearances in one of the few instances of the kind on record, is taken from the Philosophical Transactions, 1687. Dr. Tyson, in stating what was observed in the bladder, says,—"Therein, upon Apertion, we discovered a very strange sort of Cystes or Bags, of the exact Figure of Eggs, of several dimensions, some larger than Goose Eggs, others as big as Hen Eggs, to the number of twelve in all; and about eight of them whole and repleat with a limpid Serum; . . ; all of them loose and free, without the least adhæsion, either to one another or to the Coat of the Bladder; . . nor could we imagine that this miserable patient could possibly make any Water but what happened upon the breach of some of these watery Tumours, when the Bladder was crouded beyond its dimensions. . . . . The *Vreters* were of the largness of the Small Gutts in Children, so that they could easily admit two fingers into their Cavity. . . . One of the *Vesiculæ*, being opened, had a large cluster of small *Ova* as big as Grapes, all repleat with Liquor. All the rest contained nothing but *Serum.*" Two small ova were observed at the entrance of each ureter, having descended from the kidneys.—*Liverpool Med. Journ., July.*

COLD AFFUSION IN TYPHUS.

The following is given as an example of the efficacy of this remedy in fever. Margaret Mann, æt 16, a patient of Dr. Macrorie. The head symptoms were those chiefly complained of. The *cold affusion* was ordered, and on the following day there was this report:—"The cold affusion had the effect of lowering the pulse, and producing profuse diaphoresis, with evident good effect. She passed a tranquil night, and feels better."—*Op. cit.*

THE
London Medical and Surgical Journal.
Saturday, August 2, 1834.

MORISON'S PILLS—PATENT MEDICINES.

In addition to the explanations that have been attempted of the statements as to the quantity of Morison's pills persons have taken without being poisoned, we must append another. We understand that the patent medicine trade, when it found that Morison's pills were monopolising all the fools, set about another and a very harmless pill in opposition, bearing a title *idem sonans*, but with a double *R*; so that what between Morison and Morrison, the chances were equal for life and death on the *large* scale. The amount the veritable Morison pays annually for medicine labels is said to be enormous.

The common phrase—"Patent Medicines"—is, we believe, sometimes misunderstood. A patent may of course be obtained for any new medical preparation, as well as for any discovery in the arts, but, we believe, it is seldom resorted to. A patent was obtained for James's Powder, but it is known the specification was false. A few other cases of patents we mentioned in a late number of this Journal. The common "Patent Medicines" are mere secret preparations, and sold under certain names in which the magic resides; and upon them the legislature imposes a certain tax for the purposes of revenue.

Apparently this tax operates, and is perhaps intended, to diminish their sale. But the lower orders believe, and puffs sometimes assert, that the tax is a kind of sanction to the value of the nostrum. "By the King's Letters Patent" is a very common beginning. It is difficult to

legislate upon this subject. It occurs to us, however, that all persons, selling ready compounded medicines, should be bound to label their composition on them. This rule would not interfere with the sale of certain compounds, whose value is admitted, whilst it would check the nefarious practices of the secret quack. It would annihilate the source of his power in the ignorance of his sufferers—and there is no pretext of property to allege in his behalf. There was a time when eminent practitioners, such as they were, made a secret of their remedies. That time is passed away: the incommunicable secret of the modern practitioner are his powers of diagnosis. We think the law of patent, as applicable to medicines, might be abolished altogether.

As a matter of curiosity, we have extracted the following entries, relative to medicine for the year 1832, from Mr. Porter's Tables of the Revenue, Population, and Commerce of the United Kingdom.

	DUTY.	AMOUNT.		TOTAL AMOUNT.
		England.	Scotland.	
Medicine Venders	0 5 0	684 10 0	39 0 0	723 10 0
	0 10 0	1,444 10 0	36 10 0	1,531 0 0
	2 0 0	2,064 0 0	58 0 0	2,122 0 0
Medicine Labels	0 0 1½	22,167 0 7	57 13 4½	22,224 13 11½
	0 0 3	13,012 5 6	36 18 0	13,049 3 6
	0 0 6	3,445 17 6	39 19 6	3,485 17 0
	0 1 0	4,463 6 0	3 0 0	4,466 6 0
	0 2 0	307 16 0	—	307 16 0
	0 3 0	845 11 0	—	845 11 0

It will be readily ascertained from this table of duties, what an enormous sum is received by the sale of Patent Medicines.

THE PARLIAMENTARY COMMITTEE.

While one of our cotemporaries, under a species of political bias, affects to connect every phasis in public affairs with the progress and prospects of Medical Reform, to the success of which, however, we doubt not his attachment, another seeks to retard and discredit the end by vilifying the means. We doubt whether the most benighted advocate of corporation abuses, giving him credit for a small share of common sense, ever for a moment entertained the hope of reprieve from the chance of a Tory administration again stepping into office. Whatever hazards there may be still to be encountered from the reluctance of the House of Lords, there is no other danger to be apprehended; and the chance of miscarriage there should stimulate the real and zealous friends of Medical Reform to place the existing abuses in such a palpable shape, and to propose such temperate and well considered remedies, passion and prejudice apart, that their Lordships cannot, in the face of the country, twist a measure of public expediency into a party question.

That the investigation should have gone on to such an extent—that the opinions of practitioners from all quarters, and even of all ranks, should have been consulted, is an offence never to be forgotten by those who laboured for an inquiry of their own by Royal Commission.

That the trusty and well beloved Royal Commissioners, that were to be, should be obliged to go into the witness box in common with licentiates and general practitioners, even before a parliamentary tribunal, was felt to be a practical degradation, a sure forerunner of approaching changes.—*Hinc illæ lachrymæ.* Hence the outcry of our cotemporary, in which his temper has got the better of his discretion. Does our cotemporary forget, when he alleges certain remonstrances to have been made, that a committee is independent of all other authority except that of the House? It would have been otherwise with the Royal Commission, which we are bound to admit would, in truth, have made short work of the inquiry.

Clumsy as is the invention, let us for a moment ask the question, whether the inquiry has in fact exceeded all reasonable and necessary bounds? Confidently we assert it has not. We are not aware that any person has been examined whose opinions, either as an individual or in consequence of the interests with which he was connected, were not worth ascertaining; and though there has been considerable uniformity in the sentiments of the independent practitioners who have been examined, the *number* of consenting witnesses gives irresistible force to their joint opinions.

Full and elaborate and satisfactory as the inquiry is, will the cost outweigh the advantages? Are we likely "to pay too dear for our whistle?" To answer this interrogatory, we apprehend it is quite unnecessary to appeal to the important consequences of the inquiry both to the large body of practitioners in medicine and to the public interests. We will not overwhelm our adversary with such a reply;—it involves principles on which we are at issue: it begs the question; it supposes there *is* something more interesting at stake than the predominance of a few rotten corporations. The actual expense, then, may be readily estimated when we state, that such of the witnesses as reside in London are to be allowed one guinea, if they ask it, and such as are brought from Ireland are to have £30 for their whole expences. Such as are brought from Scotland, the sum of £20, and from the provinces of England £10 for the like expences. We believe, then, we are above the mark when we calculate the whole expense of witnesses and printing at £2000. The objectors may make much of that!

The Irish inquiry is still going on.

NOTATION APPLICABLE TO ANATOMY AND PHYSIOLOGY.

A short time ago Dr. Lardner delivered a course of lectures at the Royal Institution, and subsequently at the Mechanics' Institute, upon Mr. Babbage's celebrated Calculating Machine. The last Number of the *Edinburgh Review* contains an admirable *resumé* of these lectures, from the pen of the lecturer, to which we recommend such of our readers, as feel an interest in understanding the nature of the most wonderful invention of the age, for a plain and satisfactory account of this wonder-working piece of mechanism.

Were we addressing merely students, we should take this opportunity to impress upon them the necessity of applying their leisure hours to studying the principles of mechanical philosophy. The very pursuits of their profession, in addition to the character they have to sustain as members of a *learned* profession, point out the propriety of this course. But we must abstain.

We have been led to these remarks by

a singular passage we have met with in the article in question, with which we shall conclude after a few preliminary remarks in explanation.

In inventing his elaborate machinery, Mr. Babbage was struck with the impossibility of bearing in mind the variety of motions propagated simultaneously through many complicated trains of mechanism. In consequence of this, he was led to invent a scheme of *mechanical notation*, applicable to all species of machinery, which exhibits by a peculiar system of signs the origin and nature of every motion that takes place throughout the machinery; and also a map of what every part of the machinery is doing at each moment of time. This enabled him to *pack* his machine, so that no incompatible motion should take place, and to make the utmost economy of *time* in accomplishing a certain effect.

"Mr. Babbage," continues the reviewer, "with the assistance of a friend, who happened to be conversant with the structure and operation of the steam engine, has illustrated his notation with singular felicity and success in its application to that machine. An eminent French surgeon, on seeing the scheme of notation thus applied, immediately suggested the advantages which must attend it as an instrument for expressing the structure, operation, and circulation of the animal system, and we entertain no doubt of its adequacy for that purpose. Not only the mechanical connexion of the solid members of the bodies of men and animals, but likewise the structure and operation of the softer parts, including the muscles, integuments, membranes, &c., the nature, motion, and circulation of the various fluids, their reciprocal effects, the changes through which they pass, the deposits which they leave in various parts of the system, the functions of respiration, digestion, and assimilation, all would find appropriate symbols and representatives in the notation, even as it now stands, without these additions, of which, however, it is easily susceptible. Indeed, when we reflect for what a very different purpose this scheme of symbols was contrived, we cannot refrain from expressing our wonder that it should seem in all respects as if it had been designed expressly for the purposes of anatomy and physiology."—*Edinburgh Review*, No. 120, p. 318.

PROVINCIAL MEDICAL AND SURGICAL ASSOCIATION.

The second anniversary meeting of this association was held in this town on Friday last. The council assembled at the School of Medicine in Paradise-street, at half-past nine in the morning, to arrange the preliminary business; and the proceedings of the general meeting commenced at half-past twelve o'clock, at the Theatre of the Philosophical Institution. Dr. John Johnstone was unanimously called upon to preside; and amongst other members at the time in the room were Sir Charles Throckmorton and Joseph Crane, Esq., the fathers of the profession; Dr. Kidd, F.R.S., Regius Professor of Physic in the University of Oxford; Dr. Carrick, Dr. Davis, Dr. Riley, Mr. Hetling, and Mr. Fripp, of Bristol; Dr. Barlow and Mr. Soden, of Bath; Dr. Jeffrys and Mr. Dawson, of Liverpool; Dr. Bardsley, Dr. Alexander, and Messrs. Ransom, Wilson, and Turner, of Manchester; Dr. Jones, of Denbigh; Dr. Thackeray and Dr. Forbes, of Chichester; Dr. Hastings, Dr. Malden, Dr. Field, and Dr. Streeten, and Messrs. Sheppard and Hebb, of Worcester; Dr. Wake, Dr. Luard, Dr. Connolly, and Mr. Hiron, of Warwick; Dr. Loudon and Mr. Jennings, of Leamington; Mr. Addison of Malvern; Mr. Alexander, of Corsham, Wilts; Mr. Bucknill, of Rugby; Mr. Coley, of Bridgnorth; Dr. William Connolly, of Cheltenham; Dr. Davis, of Presteign; Mr. Flint, of Stockport; Mr. Fowke, Mr. Edwardes, and Mr. Gill, of Wolverhampton;

Mr. Griffiths, of Hereford; Mr. Hughes, of Stafford; Dr. Kennedy, of Ashby-de-la-Zouch; Dr. Lloyd, of Ludlow, and Dr. Lloyd, of Shiffnal; Dr. Moss, of Dudley; Mr. Smith, of Southham; with many other gentlemen from remote parts of the kingdom, whose names we could not obtain.

The business of the day was opened by Dr. John Johnstone, who spoke as follows:—

Gentlemen,—Before I proceed to open the business of this anniversary of the Provincial Medical and Surgical Association, to which I was appointed President by that held at Bristol in the past year, permit me to thank you from my heart for the distinction and honour conferred upon me. To be deemed worthy of such a distinction is a source of inexpressible pride and gratification to me; to have it conferred when I was absent, afar off, adds, if possible, to my gratitude; and when I look round and see in this assembly men distinguished for their rank, for their talents, for their accomplishments, and for the confidence reposed in them by society, surely there is sufficient reason for exultation on my part. Nor did any occasion ever present itself more pregnant with congratulation to any society than that which is offered to us this day, when an assemblage of learned men, professors of the art of healing in its various branches, more numerous, perhaps, than was ever assembled for the same purpose before, has met, with disinterested zeal, from parts of the kingdom so remote. Yes; when we consider that we assemble, not to serve the purposes of faction—not to enhance or secure our own personal interests or emoluments—but for the end and aim of communicating knowledge to each other, and of advancing that art which, above all others, tends to promote the happiness by administering to the health and physical well-being of our species—assuredly, gentlemen, I have a right to congratulate not only you, but also our countrymen at large. The value of the services of our profession I believe the enlightened public are not insensible to.—"The zeal, the eager spirit of investigation, the indefatigable perseverance, the self-immolation in the cause of truth, which have ever been the characteristics of it, have often received for their noble exertions in the noblest of all sciences—the science of relieving suffering humanity—the approbation and applause of admiring nations." You will agree with the author whom I have just quoted:—"It were tedious, nay, it were invidious to select instances; the respect universally paid to medical men is sufficient testimony of the estimation in which they are held." Gentlemen, they will find, as they have ever found, that their confidence is rightly placed—that we are still forward to experiment on ourselves—still the first to rush on danger—still the last to yield to despair. In fine, that we spend our lives in the search of those means which may best improve the imperfect condition of our race, and, by framing associations such as this, establish a co-operation the best calculated that can be devised to extend the limits and increase the usefulness of the healing art; for it is only by associating with our own the knowledge of others, and, as it were, amalgamating, concentrating, piling facts together, that we can arrive at great results. All great men have become so by taking advantage of the knowledge of preceding ages; and it is the ignorant empiric alone who pretends that he only possesses all the learning of the world. A physician who would, by his own experience alone, assume that he should become consummate in his art, would require a life of several ages to do it, besides the possession of the most sublime genius. Study, indeed, may furnish us, in a very short time, with the discovery of ages: an hour is sufficient to inform us of truths which were purchased with the care and trouble of years—but solitude, though the school of genius, is a boundless ocean; the communication of knowledge in associations like ours pours all the rivulets of information into a general stream, which fertilises the soil through which it flows. Of the progress of our Association, a report will now be read which must gratify your best feelings; it will speak for itself. On other passing events which are our common concern, that great question now before the Legislature, viz., the modifications that ought to be adopted for regulating the education of practitioners, and giving the right and fixing the boundaries of practice, is too wide and too important to be discussed in a few words. There can be no doubt that qualifications should be nicely ascertained, for in the mere teaching of our art, as society is at present

constituted, there is little difficulty. Every master, whether in medicine or surgery, if he is much employed, cannot fail to place that practice before the eyes of his pupil, who, with a common share of sense, and proper previous instruction, must profit by it. Besides the metropolis, many of our great towns now furnish facilities for lessons in anatomy, physiology, pathology, and natural philosophy; and to use the words of our learned and honoured friend, the founder of this association,—"Everything now conspires to render the present a fit time to make our great experiment. Let us look alone to the numerous charitable medical institutions, which, to the honour of the provinces, flourish so vigorously in every direction. The means which they afford to increase our knowledge of the medical art, if they really were sanctuaries of science as well as of sorrow, are incalculable." But, gentlemen, though great talents may surmount difficulties, we are to rely upon primary education for forming high character. Science alone is not sense; before it can be made efficient, and capable of being embodied in the intellect and character of the man, you must give him previous and early instruction—you must prepare the soil for the crop, before you sow the seed. Is it, then, classical instruction alone that you would inculcate as supremely necessary? No, not alone—certainly not alone; but it is combined with the wide range of moral and religious instruction, the best groundwork of future judgment and higher intellect. Give the boy while he is your pupil an elevated sense (which will combine all the minor considerations), and it will stamp his future character. Prick on the ruddy stripling with high words and thoughts, and depend upon it, when his hair is grown grey, that he will illustrate his education by high deeds. There are many other topics which occur to my mind, as belonging to the task of your orator, which I shall not touch upon. The future can only be imagined by the past, and that future is rich with promise; and the dark clouds which hang before it are gilded with hope. The collections of useful knowledge—the communication and comparison of facts—the clashings even of opinion—cannot fail to be precious and abundant in their produce to this meeting. It will naturally constitute a part of the task of your orator to consider the transactions of the association, or I should take pleasure in dilating on the merits of the papers now printed; the originality of some, the ingenuity, judgment, and sagacity of others, and the zeal and good displayed in all for the promotion of science. Nor can it escape our observation, that such records, even though less elaborately prepared, may be most advantageous to science. In whatsoever station of practice a man may be, something of more or less importance may occur for him to communicate; he that cannot form a sheaf may glean an ear, and thus contribute to the general harvest. It is the endeavour we solicit and encourage. Let every man do his part, and the end we aim at will be gloriously accomplished. Thus, then, by mutual instruction, and by collecting together the scattered rays of medical knowledge, science will be advanced. Thus, too, will the character of its members assume a more dignified attitude, and gain a higher position in society. I do not mean the decorations and titles too often purchased by intrigue and the countenance of a court; but those higher honours of enlarged accomplishment, personal dignity, and devotion to the cause of humanity, which so often illustrate the members of our profession, and win the confidence of society. Nor are such associations as these of trifling consequence to ourselves morally; by bringing the remote members of a learned profession together, and making them known to one another. Distance mystifies and disguises objects, often exhibits them in false colours, or of unnatural dimensions; and hence is often productive of wrong estimate and misconception. On the other hand, proximity makes them more clear, and dissipates the doubts which gave rise to error. For who has not felt prejudice extinguished by nearer view—by eye beaming on eye—voice answering to voice? Who has not felt animosity appeased by the tone and look of kindness? Let the meetings of our association become a solemn league and covenant, binding the members together in goodwill and faith; and thus, while our studies and pursuits bear healing on their wings, we shall be more disposed to treat each other with affection and consideration; to bear and to forbear; even when malignantly assailed to cast aside resentment, and listen to the accents of peace.

"Tuque prior, tu parce, genus qui ducis Olympo,
Projice tela manu."

After the applause which followed this address had subsided, the report of the association was read by the Secretary.

A retrospective address, embracing the principal medical and surgical events of the last year, was next delivered by Dr. Connolly, of Warwick, in the course of which the orator alluded to every important occurrence of the last year, and proved, in the most eloquent and satisfactory manner, how remarkably the present period is distinguished by the great zeal and industry in the careful collection and arrangement of facts evinced by the members of the profession in every department of medical and surgical science. It is impossible to describe the strong feelings of satisfaction expressed by the members of the association at different intervals during the delivery of this most eloquent and elaborate address. The oration was originally assigned to and undertaken by the lamented Dr. Darwall of this town, to whose memory and professional character, Dr. Connolly, in his commencement, most feelingly alluded.

Mr. Turner, of Manchester, then read a comprehensive report on the present state of knowledge on anatomy, and introduced to the meeting a classification of the elementary tissues entering into the composition of the human body, which was generally acknowledged by all present to be of great merit, and to possess much originality. This report was listened to with the greatest admiration, and his auditory could not fail to be particularly struck with the number of anatomical facts embodied in the short space of time dedicated to it. It embraced a general view of the progress of anatomy, alluding to the different epochs characterised by improvements in the science; and the rapid progress which has been made in anatomy during the last half century was most forcibly developed.

The report which Dr. Henry, of Manchester, and Mr. Jennings, of Leamington, had been requested to prepare on the Chemistry of the Animal Fluids, as illustrative of Pathology, was then read by Dr. Streeten, of Worcester, in consequence of the illness of Mr. Jennings. The able manner in which he described the changes produced in the blood under certain conditions of the animal economy, make it a matter of regret that the author was prevented from extending his researches to the pathological states of the other fluids. A communication from Dr. Nieuvenburgs, of Amsterdam, on the present state of Medical and Surgical Science in Holland, was read by Mr. Hebb, of Worcester, foreign correspondent for that country.

Foreign Hospital Reports.

HÔPITAL DE LA CHARITE.

Luxation of the Head of the Humerus downwards, reduced Six Months from the time of Displacement.

This accident occurred in a man 56 years of age, in consequence of a fall, in the first place, on the palm of the hand, afterwards on the shoulder. The nature of the accident was at first mistaken, and treated for contusion. The patient after suffering six months, without regaining the movements of his arm, came to Paris, to be received into the above hospital. The existence of a luxation of the humerus downwards was very manifest. The first attempt at reduction proved ineffectual, and the shoulder by M. Roux's directions was to be constantly fomented by emollient applications.

The second attempt, after keeping the parts in a state of extension for twenty-five minutes, reduced the luxation. The method adopted by M. Roux was direct and horizontal extension, such as described by M. Boyer.

This observation is worthy of notice, in showing what extent of time may elapse, and the bone be replaced in its natural position.

HÔTEL DIEU.

Perforation of the Synovial Capsule. Action of Air in the Articulation of the Knee Joint.

In January last a young man, 22 years of age, of good constitution, was admitted into the Hôtel Dieu under M. Breschet's observation, with a wound on the knee, penetrating the joint. Synovia escaped from the wound. This wound had existed for six days, it was situated at the internal part of the knee, and about an inch in extent.

At the time of his admission, the knee was swollen, red, inflamed, and painful on pressure; the synovial bag puffed with synovia; his pulse was rather quick. At the time he wounded himself he felt acute pain; there was slight hæmorrhage, which he checked by tying his handkerchief around his knee. For two days afterwards he continued his employment, at which period he felt darting pains in the wound and knee: in the evening the swelling became enormous, the patient could not rest, fever and delirium supervened. From this time till his admittance, the wound remained opened and uncovered. The edges of the wound were brought together by means of adhesive plaster, and the knee covered with sedative cataplasms. A blister two days afterwards was applied, with a view of causing reabsorption of the synovia, and in a few days the patient became completely cured.

When any solid concretion is extracted from the knee-joint, which has formed in it spontaneously, great precaution is always taken lest air be admitted into the synovial cavity. Certainly, from many cases on record, the danger arising from the admission of air into the synovial cavity is not so great as generally believed, and it is a question in most cases, especially in the above, whether the symptoms did not arise rather from neglect of the wound than from the nature of the wound itself.

British Hospital Reports

ST. THOMAS'S HOSPITAL.

Hydrocele—Employment of the Seton.

Case I.—Richard Drake, aged 32, of lymphatic temperament, was admitted June 11th, 1834, into this hospital, under Mr. Green, for a large hydrocele. States about a twelvemonth since he observed at the lower part of the scrotum a small tumour, which for three or four weeks continued to increase, and afterwards remained stationary for about six months. Within the last two weeks he has suffered from pain in the loins and along the spermatic cord. The hydrocele at the present time is very large; the pains in the loins and in the course of the spermatic cord continue the same. By placing a candle on one side of the scrotum the rays of light may be observed on the other passing through the tumour. Up to the present time he has had no medical advice. Mr. Green, after ascertaining that hydrocele was the cause of the enlargement, employed a seton for its cure; this gentleman does not perform the operation with the seton canula as recommended by Mr. Pott, but simply makes use of the trocar with its common canula, and passes through this canula the probe armed by the seton; after this the canula is withdrawn, the two ends of the seton loosely tied together, and the patient sent back to bed.

About three hours after the operation, the patient was seen by the dresser, complained then of no pain, but the scrotum had commenced to swell, and in the part he felt slight pain.

25th. Has much pain in the scrotum, in the course of the spermatic cord and loins; no febrile symptoms. In the evening his pulse became rapid; complained of thirst, but of less pain in the loins; scrotum exceedingly painful. At one A.M. all febrile symptoms increased; pulse more rapid and hard; skin hot; slight headach; pain in the scrotum and loins much increased: the former has become very red, and nearly attained the size of the hydrocele. The seton was now withdrawn, the headach discontinued, pain in the loins and scrotum became less, and the swelling decreased in size. From this time he began to improve, and after remaining in the hospital three weeks he became quite well, and was discharged. The seton, in this case, remained in twenty-four hours.

Case II.—Thomas Young, æt. 36, of sanguineous temperament, was also admitted under Mr. Green for hydrocele of the tunica vaginalis. He stated, sixteen months since he received a blow on the testicles, after which he observed a swelling at the lower part of the scrotum: this gradually increased until it had obtained its present size. Mr. Green performed the operation, and made use of the seton precisely in the same way as in the other case. The seton remained in thirteen hours, at which time the parts became so much swollen and inflamed that it was obliged to be withdrawn. Slight febrile symptoms supervened, which soon disappeared; adhesive inflammation ensued, and in about three weeks he became perfectly well.

Case III.—Wm. Tenning, of bilious temperament, aged 34, was admitted under Mr. Green for hydrocele, the 26th of June last. Stated the tumour came spontaneously, and it was of considerable size when he discovered it. The operation with the seton, without the seton canula, was performed in a similar manner; the seton remained in upwards of twenty-four hours, and in the course of a fortnight the man was perfectly cured.

Within the last two years we observe in the clinical books in the wards of Mr. Green, several cases treated in the same way, and in all the cure has been complete.

As, however, there are so many methods, and different manœuvres had recourse to in this operation; and though, in the same hos-

pital, the success of Mr. Green has been very great, yet the other surgeons can boast of equal success, for both Mr. Travers and Mr. Tyrrel have recourse to other means. The method adopted by these latter surgeons is by injection, and this remedy has certainly been extolled much more than the seton. Mr. Tyrrel within the last year has had seven cases, all of which have been treated by injection, the lotion containing a few grains of the sulphate of zinc. This remedy, by this practical surgeon, has always been found sufficient to produce adhesive inflammation. We may also find several cases quoted by Boyer in the Dict. des Sciences Med., in which similar treatment has sufficed; and he mentions a case in particular, which got perfectly well in the course of a month, though the testicle at the time of the operation was in a state of enlargement. Many other cases have been observed both this and the last year under Mr. Travers, who has submitted his patients to this treatment, and all with the most happy results.

The beneficial effects arising from this different plan of treatment is a proof of the little danger attending either; but certainly if a mild solution of the sulphate of zinc is sufficient to produce the required adhesive inflammation, it is much better, and less painful than the use of the seton, which requires so much watching; and the danger of too excessive irritation arising in an irritable constitution is, we believe, a sufficient argument for the adoption of the injection. If, however, the membranes be much thickened, we believe the seton, as adopted by Mr. Green, one of the best modes of practice; otherwise, when symptoms indicate a natural state of the membranes, the milder the solution injected the better.

APOTHECARIES' HALL.

NAMES of gentlemen to each of whom the Court of Examiners granted Certificates of Qualification, Thursday, July 24th.

John Anderson . . . Richmond.
Edward Sellick Hare . . Yoxall.
William Shortliff . . .
George Parsons . . . Devizes.

CORRESPONDENTS.

A Reformer.—Mr. Warburton proceeds with as much energy and zeal as ever, and is as conversant with the abuses in the Medical Corporations in Ireland as with those of England and Scotland.

Scotus.—The whole profession will be changed.

An Inquirer.—The dose of Créosote is from two to six minims. It has done good in six cases of epilepsy in St. Thomas's Hospital, but completely failed in phthisis and rheumatism.

J. J.—It would be a breach of privilege were we to give weekly reports of the proceedings of the Parliamentary Committee. We shall notice the other matter next week. We request our valued Correspondent to remember his promise.

J. L.—We shall notice the matter when an opportunity offers.

S. A.—The article is too personal, and written under angry feelings.

Erratum.—In Professor Cooper's last Lecture, p. 804, Vol. V., for *Venereal Varicocele* read *Venereal Sarcocele.*

METEOROLOGICAL JOURNAL.

MONTH. July, 1834.	Moon.	Thermom.			Barometer.		De Luc's Hygrometer.		Winds.		Atmospheric Variations.		
24		69	71	63	29·75	29·73	72	71	N.	N.	Fine	Fine	Fine
25		66	73	62	29·73	29·71	71	67	N.W.	W.N.W.	——	——	——
26		67	72	55	29·60	29·42	66	65	W.	S.S.E.	——	——	——
27		63	67	60	29·48	29·56	65	66	E.S.E.	S.S.E.	Cloudy	Cloudy	——
28	☾	68	72	64	29·71	29·72	67	80	E.	E.	——	Fine	Cloudy
29		72	78	64	29·72	29·68	85	91	E.	E.N.E.	Fine	——	——
30		66	72	63	29·58	29·61	98		E.	S.S.E.	Rain	——	Fine

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ALL Communications and Books for Review to be forwarded (free of expense) to the Publisher, 356, Strand, near King's College.

THE

London Medical and Surgical Journal.

No. 132. SATURDAY, AUGUST 9, 1834. Vol. VI.

LECTURES

ON THE

PRINCIPLES, PRACTICE, & OPERATIONS OF SURGERY,

BY PROFESSOR SAMUEL COOPER.

Delivered at the University of London, Session 1832—1833.

LECTURE CI., DELIVERED MAY 3, 1833.

Gentlemen,—I have already explained to you, that a hydrocele of the tunica vaginalis is usually a smooth tumour, of a regularly pyriform shape; but that exceptions are occasionally seen, in which the swelling bulges out on one side or another in the form of a pouch, that seems to be annexed to the principal swelling. I have also told you of the hour-glass shape of certain hydroceles, and have adverted to the variety of the disease, in which its cavity is divided into distinct bags, or cells. Now, one circumstance, relating to this last case, merits your attention, which is, that you cannot treat it efficiently, or, indeed, with the slightest prospect of a cure, by injection; and the proper plan is that of making a free incision into the tumour, and discharging the fluid from the several pouches in which it is confined. Thus you may accomplish a radical cure with tolerable certainty. No doubt in some cases, where a hydrocele has been found to have two distinct cavities, this peculiarity has depended upon a hydrocele of the tunica vaginalis being combined with an encysted hydrocele of the spermatic cord.

In all ordinary cases, I recommend you to give the preference to the treatment by injection, as the mildest and surest. Where, however, the hydrocele contains several different cavities, not communicating together, where likewise the nature of the disease is doubtful, the case is variously complicated with a hernia, or the presence of a hernial sac, or the method of injection has already failed, it may be the most prudent course to practise an incision, in preference to a puncture, and this, under particular circumstances, even with extreme caution. When, however, the doubt is, whether the disease is hydrocele or medullary sarcoma, a puncture with a small trocar seems to be followed by no ill consequences, as was stated to you in the last lecture; and it is, I think, in such a case preferable to an incision, which, in the event of the case being hydrocele, would be an unnecessarily severe mode of cure. Or, if you please, where an injection has not answered, you may employ the seton, which is a milder practice than the treatment by incision.

Gentlemen, I will take leave of common hydrocele of the tunica vaginalis, with giving you one important caution, which is, never proceed to puncture the tumour without having examined it most carefully; for various cases are recorded, in which the testicle, instead of having the fluid in front of it, has been adherent to the front of the interior surface of the tunica vaginalis, and actually been wounded with the trocar, none of the fluid collected at the sides of this body being discharged. One of the best ways of avoiding this serious error is to examine every hydrocele with a wax taper, in the manner specified in the last lecture; for if the forepart of the tumour seem opaque, and when compressed occasion the sickening pain always arising from compression of the testicle, you may infer, that this body is adherent to the front of the cavity of the hydrocele, and would be wounded by the introduction of the trocar in the usual place.

Congenital hydrocele signifies a collection of water in the tunica vaginalis, attended with a narrow communication between the cavity of the latter membrane, and the interior of the peritoneum. You know, gentlemen, from the remarks delivered on the subject of hernia, that in the fœtus the testicle is contained in the abdomen, whence it descends into the scrotum, generally a little while before birth, but sometimes not till after this event. The production of peritoneum, by which it is accompanied, and which is to constitute the future tunica vaginalis, usually closes soon after the descent of the

testicle is completed. But before this happens, fluid may pass into it from the cavity of the peritoneum, and a peculiar form of hydrocele, termed *congenital*, be the result. This case has one symptom that does not characterise other hydroceles; namely, pressure makes the swelling disappear by forcing the fluid up into the cavity of the peritoneum. In this respect, then, you see a similarity to hernia. The hydrocele, however, is a transparent, soft, pyriform swelling, in which a fluctuation can be plainly felt. Not only does it diminish or disappear under pressure, but also when the patient lies on his back; resuming its ordinary shape and dimensions as soon as he puts himself in the erect posture again. This hydrocele may take place either when the testicle has descended properly into the scrotum, or when it has not descended, and is not even perceptible; or it may occur while the testicle is somewhere in the inguinal canal, or can be felt just at the abdominal ring. In these latter cases, the tunica vaginalis is elongated and extended from the place where the testicle is lodged down into the scrotum. These are circumstances very necessary to be remembered, because they influence the treatment. This must be manifest, because you cannot prudently attempt anything for the cure of the hydrocele, that would interfere with the descent of the testicle, or be likely to injure this organ.

Gentlemen, the best mode of treating this congenital hydrocele, when not complicated with a retarded descent of the testicle, is to apply a truss, for thus you will at once remove the danger of a protrusion of the bowels, and promote the closure of the passage between the scrotum and the belly. No sooner has the obliteration of the opening been accomplished, than a further supply of fluid from the cavity of the peritoneum is cut off, and what is contained in the tunica vaginalis is absorbed. This practice is more advisable than the old method of cure by means of a stimulating injection thrown into the tunica vaginalis, while an assistant made pressure at the ring, in order to keep a portion of the fluid from entering the cavity of the peritoneum. I deem the treatment by means of a truss more advisable, first, because unattended with any risk of bringing on peritonitis; and, secondly, because it is adapted to expedite the closure of the communication between the scrotum and the belly, a desideratum which is entirely out of view in the treatment with injections.

Gentlemen, I will now detain you a little while on the subject of another variety of hydrocele, usually called from its situation *hydrocele of the spermatic cord.* This disease, which is much less frequently met with than hydrocele of the tunica vaginalis, is commonly described as an accumulation of fluid in a thin membranous cyst within the sheath of the cord. Mr. Brodie, indeed, regards this encysted ydrocele as corresponding to a cyst filled with fluid, produced in any other organ of the body, and takes notice of its loose connexion to the surrounding parts. While, however, Sir Astley Cooper admits this mode of formation, he conceives that, in certain examples, the production of the disease is owing to the adhesion between the peritoneal investments of the cord happening to be imperfect in one place, so as to leave a cavity between them. This, if I remember rightly, is also Scarpa's explanation, who published, many years ago, an interesting memoir on the present complaint. The swelling is generally oblong, or globular, and, if it be so placed as to admit of being grasped and pushed forwards, it will often present a light blue colour, with a degree of transparency about it, and considerable tension. Few specimens of it attain much magnitude, its ordinary size not exceeding that of a pigeon's egg, and pain is not one of its characters. You will now and then hear or read, however, of a large one, including several ounces of fluid. When situated in that part of the cord, which is within the inguinal canal, the tumour is liable to be mistaken for hernia, though you will here observe that it is free from pain, as well as from the guggling sound or feel perceptible in intestinal herniæ, and that the functions of the alimentary canal are not in the least disturbed or interrupted. Remember also, gentlemen, that though you may force such a tumour a little way up the inguinal canal, you cannot bring about its perfect reduction. When the tumour is on the outside of the abdominal ring, you recognise its nature by various circumstances. You advert to its transparency, its fluctuation, its giving no sudden impulse to your finger when the patient coughs, and to its being unconnected with any of the organs in the abdomen, even though it may admit of being pushed into the ring. Under these or any other circumstance, as I have already said, you can never put it completely up into the belly, and, when left to itself, it soon descends into its usual place, above which you perceive that the cord is free.

I may next observe, gentlemen, that the fluid of a hydrocele of the spermatic cord is generally paler and more limpid than that of a common hydrocele, and contains less albumen.

One of the best modes of treating this disease is to make an incision into it, and then fill the cavity with lint. In this manner my friend Mr. Quain has just cured a case, which some of you may have lately seen at the University Dispensary, in a boy about seven or eight years of age. Another very eligible plan of treatment consists in passing a seton of two or three threads or silks through the swelling. These may be introduced in the way recommended by Sir Astley Cooper, with a common curved needle. The latter method deserves the praise of mildness, and I believe is tolerably certain of answering, though, perhaps, less so than the treatment by incision. If you fill the

cavity with lint, after laying it open, there will be no occasion for the removal of any portion of the cyst, in which proceeding there is some risk of doing injury to the vessels of the cord. The cavity will suppurate, granulate, and be very soon obliterated.

Hydrocele of the spermatic cord, when small, produces little or no inconvenience; and, on this account, some practitioners scarcely consider it as a case requiring the performance of any operation. If, however, the patient's mind is rendered continually uneasy by the tumour, or the tumour should be in any way a source of inconvenience, or show a disposition to enlarge, it is right to attempt its cure. Injections have so often failed in the treatment of this form of hydrocele, that I believe they are now abandoned by all the best practitioners in this metropolis, and every part of the United Kingdom.

Besides this kind of encysted hydrocele, there are other varieties, situated on the epidydimis, or the testicle. The former lies, as Mr. Brodie has recently explained, between the epidydimis and the inner layer of the tunica vaginalis; the latter between this membrane and the tunica albuginea.

The next case, gentlemen, which it would be unpardonable in any practical surgeon not to be fully acquainted with, is well known under the name of

Hæmatocele, which, etymologically speaking, means simply a tumour composed of blood, at the present day always denotes a collection of blood in the tunica vaginalis. The swelling is of a pyriform shape, like hydrocele, from which it may be distinguished by its want of transparency, its greater weight, its obscure fluctuation, and the manner of its production, the cause being usually a blow on the scrotum, or a wound of an artery, or vein of the loose portion of the tunica vaginalis, or an injury of the testicle itself. If you use a lancet for this purpose the risk of hæmatocele is increased. Sometimes, I suspect, an enlarged or diseased vein gives way spontaneously, after the water has been discharged from the tunica vaginalis, and, continuing to bleed into the cavity of this membrane, leads to the formation of a hæmatocele. We know, however, in many instances, that a larger vessel than usually met with has been wounded, for the fluid of the hydrocele, as it flows out, is more or less mixed and tinged with blood. Some persons have become the subjects of hæmatocele in consequence of a blow on the testicle from the pummel of the saddle, in riding on horseback; and in such cases, probably the bleeding is often from the vessels of the testicle itself.

Very lately I visited with Mr. B. Cooper a gentleman who had a large hydrocele on each side of the scrotum, and one of these he had converted into a hæmatocele by a trial of his own ingenuity. Perceiving that all that a surgeon did, when he let out the fluid, was to make an opening in the swelling, he fancied that he could invent an instrument that would make the attendance of a surgeon unnecessary. After a little study, he contrived an instrument, very much like what is used by farriers for bleeding horses, only it was on a larger scale, the blade, which darted out on touching a spring, being something like a dagger. With this weapon he perforated the swelling indeed, and let out the water, but wounded some of the blood-vessels, so that in a few hours the tumour was as large as ever, and a great deal more painful. In short, the cavity of the tunica vaginalis had become distended with blood. The blood soon began to putrefy, the parts inflamed, considerable fever ensued, and, partly from the constitutional disturbance and the approach of gangrenous mischief, the patient's life was in danger. If a prompt and free incision had not been made, I fully believe his condition would soon have been hopeless. By this operation a considerable quantity of putrid blood, matter, and of a most offensive gas, sulphuretted hydrogen, having been discharged, the patient recovered very favourably.

One hydrocele was radically cured by this proceeding; but, notwithstanding the inflammation was considerable, it had not the effect of curing the other hydrocele.

Hæmatocele is only painful when complicated with inflammation, or with mechanical injury of the testicle. You may see some cases, therefore, which are painful, and others which are not so. In certain examples, a hæmatocele is combined with hydrocele; this may take place when a person, who has a hydrocele, receives a severe contusion of the scrotum, and one or more blood-vessels of the tunica vaginalis are ruptured by the violence, and the blood, which flows from them, is added to the fluid already in the tumour. The state of the case may be known by the previous accident, the sudden increase of the swelling following the injury, and the dark opaque appearance of the tumour, which no longer exhibits its former transparency, when a lighted taper is placed behind it.

Now, gentlemen, I may observe that the treatment of hæmatocele varies according to circumstances. When the quantity of blood is inconsiderable, you would not interfere with it by any operation, but endeavour to promote its absorption by means of brisk purgatives and lotions containing the muriate of ammonia. The absorption of a more copious effusion of blood in the tunica vaginalis is not likely to be accomplished, for we hear of cases in which the blood continued nearly twenty years unremoved, though changed in its appearance, and turned into a pale brown lamellated substance, very much like what is met with in an old aneurism. Sir Astley Cooper gives one instance, in which he cut into a hæmatocele that had existed seventeen years, and in which the blood, originally effused,

still remained, though in an altered condition. When hæmatocele arises from a blow, antiphlogistic treatment at first is the most prudent; keep your patient quiet in the recumbent posture, and try what benefit can be obtained from purgatives, leeches, venesection, low regimen, and cold evaporating lotions. In a later stage, if the swelling should continue of any material size, or threaten to bring on suppuration, sloughing, and other troublesome or urgent consequences, you would of course make a free incision into the tunica vaginalis, discharge the blood collected in it, and then apply emollient poultices, unless there was a tendency to a renewal of bleeding, in which circumstance linen, wetted with cold water, or the Saturnine lotion, would be better than warm applications.

If the disease were combined with hydrocele, or to follow the puncture of the latter kind of swelling, I should recommend you to lay open the tunica vaginalis, take out the blood, and then apply warm or cold applications, according as there might or might not be a disposition to a return of bleeding. In almost all cases of hæmatocele, requiring an operation, antiphlogistic means are indispensable at first; and I have seen several cases in which it has been necessary, on account of the inflammation and constitutional disturbance, to employ the lancet and other means of depletion very freely. In cases where the effusion of blood follows the puncture of a hydrocele, that is, where there is a communication formed between the cavity of the tunica vaginalis and the external air, the blood soon putrefies, and becomes a source of considerable irritation; matter forms; a tendency to sloughing is produced; sulphuretted hydrogen gas is generated in the swelling; and the patient gets into an urgent state of danger, from which the formation of a free and immediate opening into the disease is the only means of extricating him.

Another disease remaining to be explained, gentlemen, receives the name of *Varicocele*, or sometimes *Circocele*, and consists of a varicose enlargement of the spermatic veins. In former days, the first of these terms was generally restricted to a mere varicose dilatation of the veins of the scrotum, an affection requiring no particular notice; while the expression *circocele* was used to denote more particularly a varix of the spermatic veins themselves, a case more deserving of your consideration, because you are likely to be consulted for it, and it occasions a swelling that has frequently been mistaken for hernia. In the present day, these two terms are mostly employed synonymously; and when you hear of a modern surgeon speaking of varicocele, he is almost invariably alluding to a morbid enlargement of the spermatic veins, and not of those of the scrotum. When the veins of the cord are thus altered they assume a very tortuous course, their coats are considerably thickened, and the vessels have a knotty feel, attended with a greater fulness below the ring on the diseased side than the other, and with more or less uneasiness, sense of weight, and occasionally a severe pain in the testicle, inguinal canal, and loins. The swelling is sometimes very large, and of a pyramidal shape, with the base just above the testicle. When you examine a varicocele with your hand, you feel the cluster of dilated veins which are commonly described as communicating a sensation to your fingers, as if you were taking hold of a bundle of earth worms. This is the language of the old writers on surgery, and it may not be incorrect. You may distinguish varicocele from a hernia, by placing the patient in the recumbent posture, and pressing the blood of the enlarged veins upwards, or returning the protruded viscera, so as to reduce the swelling; you then cover the abdominal ring with your fingers, and desire the patient to rise while you keep the fingers thus steadily over the ring. Now, if the case be a varicocele, the spermatic veins fill again, and assume their former distended condition directly the patient is in the erect position, notwithstanding the abdominal ring is covered and compressed; but if the case be a hernia, no protrusion can happen while you keep your fingers on the ring, and consequently so long as they are thus applied there can be no return of the swelling, though the patient change his posture from the recumbent to the erect. The swelling of varicocele, when it returns, makes its appearance also in a more gradual manner than a protrusion of the abdominal viscera.

In the generality of cases, varicocele is not a very painful disease, and the patient finds any uneasiness from it relieved by supporting the testicle with a suspensory bandage or a silk net, by bathing the scrotum and groin with cooling lotions, and keeping his bowels regular. If there be greater annoyance, or any severe degree of pain, he should, in addition to the foregoing measures, observe the recumbent posture, and apply leeches. In a few rare instances, the sufferings, produced by varicocele, have been such as to induce the patient to submit to castration; but, in the present state of surgery, I am reluctant to believe, that such proceeding is justifiable. Another experiment has consisted in putting a ligature round the largest of the varicose bundle of veins; but by this you would expose the patient to the risk of phlebitis; and one of the late Sir Everard Home's patients nearly lost his life after such an operation. Some foreign practitioners have had recourse to another plan:—after dividing the integuments, they have compressed the most distended veins between the blades of forceps constructed for the purpose, and thus obliterated their cavity. The practice is said to have been attended with success; but, I believe, that any severe measures are seldom truly necessary for the relief of varicocele. One of the most serious

occasional consequences of the disease is atrophy of the testicle.

Let us in the next place, gentlemen, advert to *Diseases of the Scrotum*, a subject on which I shall not detain you long. It is scarcely necessary for me to remind you that it is liable to anasarca and ecchymosis, which, however, are here attended with no peculiarity, no circumstances different from those accompanying such affections in other common textures of the body. The scrotum is sometimes the situation of tumours; and I remember one case in St. Bartholomew's, where an excrescence in the shape of a horn, and of a horny consistence, was formed on the scrotum. In warm climates, the scrotum is often converted into an enormous mass of adventitious cellular tissue, often amounting to half a hundred weight or more, and not only burying, as it were, the penis and testicles, but absolutely disqualifying the patient for exercise or any kind of employment requiring locomotion or muscular exertion. Now and then a similar distressing disease has been seen in Europeans, and I remember that Professor Delpech operated upon one or two remarkable cases of this kind, in one of which, I think, the swelling weighed seventy or eighty pounds. It is generally, however, in warm climates that the disease is met with. Larrey relates the particulars of several cases which he saw in Egypt, and facts of the same kind abound in the records of surgery. You must all remember the case of a native of China, who died under the operation attempted for his relief in Guy's Hospital. Many successful removals of the diseased mass, however, have been performed in different countries; and it is the only expedient that can afford relief, where the patient's life is rendered a burden by the magnitude of the adventitious formation. In practising these operations, there are three principal points to be attended to: first, take care to secure every large artery as soon as divided, so that your patient may not die of hæmorrhage before the operation is finished; secondly, avoid injuring the testicles and urethra; thirdly, give the patient a cordial draught, or a little brandy, with a proportion of laudanum in it, before you begin to use the knife, so that his nervous system may be better enabled to bear the long and unavoidable agony, or the shock, if you prefer to call it so, of the operation.

Gentlemen,—I shall not be wrong in calling *chimney-sweeper's cancer* a disease of the scrotum, for the instances in which it has been known to commence in other parts are very unusual. It seems to arise from the lodgment and irritation of soot in the rugæ of the scrotum; and, perhaps, if other parts of the integuments were as well adapted for the reception and detention of this substance, we should more frequently notice the disease in them. A few cases in fact are related, in which the disease occurred on the face and limbs, and this even in persons who were not chimney-sweepers; but then, it is to be observed, they were gardeners, or labourers in some other way, requiring them to handle soot. This disease, gentlemen, commonly begins in the form of a smallish wart or induration upon the scrotum, such wart or induration very soon presenting a broken surface, from which a particularly fœtid matter is poured out, but, drying, is converted into a kind of scab, or incrustation. From time to time this is rubbed off, and followed by a more and more copious effusion of very offensive bloody ichor. At length, an ulcer of some extent is produced under the scab, with hardened, everted, or contorted margins. In time, the ulcer reaches the tunica vaginalis and the testicle, and the absorbent glands in the groin swell, burst, and change into similar malignant ulcers. I have known a chimney-sweeper's cancer commit such ravages, that the artery in the groin was laid bare by it. In some cases, indeed, the patient dies of profuse bleeding; but more usually he dies hectic, exhausted by irritation, long suffering, profuse discharge and extension of the disease to the lymphatic glands up in the loins.

Gentlemen,—This is a malignant disease, over which internal medicines and external applications possess little or no control. If, therefore, you meet with the disease in its early stage, before the testicle, the spermatic cord, or the lymphatic glands are involved, lose no time in trying useless medicines and dressings, but at once take away the disease with a knife. Even then the result will be uncertain; and, in the course of my time, I recollect more instances in which the operation was followed by a relapse than a permanent cure. We had lately, at the Bloomsbury Dispensary, a chimney-sweeper afflicted with the disease in the state of ulceration, with one or two glands in the groin enlarged, which seemed to me a prohibition to the operation. He went into one of the hospitals, where the diseased portion of the scrotum was removed; but, I am informed, he is now dying of a return of the disease higher up in the body. By these remarks, I would not wish you to suppose that the operation will never succeed when the inguinal glands are swollen. I am sure it will not answer, if those glands participate in the morbid action; but, if they be merely enlarged from irritation, or sympathy, as the expression is, then a cure may be the result, the glandular enlargement gradually subsiding after the disease has been removed. The same thing, it is well known, has occasionally been noticed after the removal of a scirrhous breast.

LECTURES ON THE THEORY AND PRACTICE OF MEDICINE,

BY WILLIAM STOKES, M.D.,

Delivered at the Medical School, Park Street, Dublin.—Session 1833-34.

LECTURE XXX.

Supervention of Apoplexy on Encephalitis—Inflammation round the Clot—Different Forms of Paralysis—Phenomena of Face and Tongue—Treatment of Apoplexy—Bloodletting—Purgatives—Use of Revulsives and Stimulants—Treatment of Paralysis.

Gentlemen,—I left off at my last lecture in considering how far the mere circumstance of suddenness of attack with paralysis could be considered as leading to the diagnosis of apoplectic effusion, and endeavoured to show, that mere suddenness of attack with paralysis was insufficient to form a diagnosis, except where they occurred in a person who had no previous symptoms of irritation of the brain;—these symptoms being pain of the head, and pains, spasms, and rigidity of the limbs. I wish to impress upon you, that you may have an attack of apoplexy with effusion ushered in by all these symptoms, particularly in cases where the apoplectic effusion is consequent on a localised inflammation of the brain. A portion of the brain, for instance, becomes inflamed and disorganised; local ramollissement takes place; and it may happen, that this, acting as a point of attraction to the fluids, may lead to the occurrence of an apoplectic effusion in the originally affected portion; and in this way you will have apoplexy preceded by all the symptoms which characterise a partial encephalitis. You will perceive, then, that the absence of these premonitory symptoms is necessary towards forming a *certain* diagnosis of apoplexy with effusion. If these symptoms have preceded the attack, it is probably either circumscribed abscess of the brain, or it is local inflammation followed by effusion. Between these two forms of disease we have no means of distinguishing.

Before I speak of paralysis I wish to make some remarks on a condition of the brain which supervenes in certain cases of apoplexy. In cases where absorption of the clot takes place, we cannot suppose that any inflammatory condition of the brain exists; on the contrary, we have every reason to believe that a non-inflammatory condition of the brain is highly favourable to this process, for whenever anything of an opposite character happens, we find that it prevents absorption. But sometimes cases occur, in which, at an earlier or later period, inflammation is set up round the clot. Now, what happens in many of these cases? Here let me repeat, that there are many exceptions to the rules given for forming the diagnosis of diseases of the brain; the variety in the symptoms of cerebral affections being so great, that it is sometimes difficult to deduce from them rules of general application. In most cases we have apoplexy followed by paralysis with resolution; but, in cases where inflammation takes place round the clot, it has been observed that the paralysed limb which had been previously in a state of resolution becomes contracted, and then we have paralysis with contraction. This contraction generally comes on in a gradual manner, but, when the case is severe, it is frequently ushered in by violent spasmodic action of the affected limbs. We have, then, the following order of phenomena: first, paralysis with resolution, and then paralysis with contraction. In circumscribed inflammation of the brain, the phenomena are the reverse of these; we have, first, rigidity and contraction of the limbs, and then symptoms of apoplexy followed by paralysis with resolution.

With respect to the paralysis which is consequent on an attack of apoplexy, there is the greatest possible variety. In some cases there seems to be paralysis of all, or almost all, of the muscles of animal life; in others, it affects only the muscles of one side of the body. A rare and extraordinary form of paralysis has been described by the French writers, who have given it the name of *paralysis croissée.* In this form of the disease, there is an affection of both sides, but not of the symmetrical members; we find the left arm and the right leg paralysed, and *vice versâ.* This is an unusual form, in fact, the rarest to be met with in practice. We may also have great varieties in the amount of the paralysis; in some cases both sides being affected, in others only one, while in others there is only a single extremity or one side of the face paralysed. We may also have complete paralysis of one side without any affection of the face. I remember a remarkable case of this kind, of which I shall give you an abstract. A gentleman, of stout muscular habit, and with a strong full pulse, had been suffering for a long time under an obstinate gouty affection. From a repetition of the gouty attacks he got a chronic swelled state of the lower extremities, which continued for some time, he being in other respects in the enjoyment of excellent health. The swelling, however, preventing him from taking his usual exercise, he applied for advice. Laced stockings were advised, the effect of which was, that the œdema subsided, and the motion of the lower extremities was restored. It is curious, that, between the period of the removal of the œdema and the paralytic attack which I am about to describe, this gentleman enjoyed excellent health. At the end of that time, on attempting to go over a step that led into the yard, he found he could not accomplish his purpose, and struck his foot against the stone. He immediately became alarmed and sat down, and soon after found that he had lost the power of using his arm. I saw him

in a short time after the accident, and found that there was complete paralysis of the arm and leg, but no distortion of the face or tongue, or the slightest lesion of intelligence. He continued in this state for some time, and then recovered, but it was necessary to take a large quantity of blood from him. In the first bleeding, as the pulse was full and bounding, I took sixty ounces of blood from the arm, and I think it was owing to the activity of the measures adopted, that he recovered so speedily. I mention the case merely to show that we may have paralysis of the leg and arm, without any affection of the face, or loss of intelligence. In some cases we find the paralysis affecting the tongue, face, and muscles of the eyelids; in some we have paralysis of the sphincter ani, or of the muscles of deglutition, or of the bladder, but these are rare, and the most ordinary form is paralysis of the muscles of one side, and distortion of the face. There is another circumstance, which seems to be so exceedingly frequent as to form a law, perhaps the most general of any in medicine, that paralysis occurs on the side of the body which is opposite to that on which the effusion occurs. If you have an effusion into the right hemisphere, you will have paralysis of the left side of the body, and, if the effusion be on the left side, the paralysis will be on the right. To this rule, however, it has been stated that there have been a few exceptions; how they have occurred it is totally impossible to explain, it is sufficient for us to know that such exceptions have been witnessed. Cases of this description have been very rarely seen since pathological anatomy has been studied with more diligence; it is, however, true, that a few have been detailed by men of great professional eminence. We want facts to throw light on this point, and, until this is accomplished, we must remain in ignorance of the cause of the anomaly. In the vast majority of instances, the paralysis is on the opposite side to that on which the effusion take place, and this appears to be explained by the decussation of the fibres of the brain at the upper part of the spinal marrow, the fibres of the left side passing to the right, and *vice versâ*. It is an interesting fact connected with this subject, that the muscles of the face follow the same law as the muscles of the extremities, and yet it is a fact, as you are well aware, that the nerves which supply the muscles of the face come off before the decussation of the fibres of the brain takes place. The fifth nerve, which supplies the face with muscular branches, is given of at a considerable distance from the decussation of these fibres, and yet we perceive that the muscles, to which it is distributed, obey the same law as those which derive their nerves from the spinal cord. Now if this decussation was the only cause of the paralytic symptoms being observed on the side opposite to that in which the effusion occurs, the muscles of the face should be an exception to this law, but we find that they correspond with other parts of the muscular system in this respect. Thus if a man gets an attack of apoplexy, followed by paralysis of the left arm, we find the left side of the face affected, and *vice versâ*. We must conclude from this, that the mere decussation of the fibres is not the sole cause of this peculiarity, and must look for an explanation elsewhere, by referring it to the intimate communication which exists between both sides of the brain by means of its commissures. Many persons are not familiar with the phenomena of the face and tongue in paralysis; they are, however, simple and easily explained. Let this diagram represent the head—here we have the right hemisphere of the brain, here the left. Now, suppose you have an apoplectic effusion in the right hemisphere, the consequence is, that you have paralysis of the left side of the body, according to the law already mentioned. What will then happen with respect to the face is, that the muscles of the left side being paralysed, and their antagonism destroyed, the mouth is drawn by the sound muscles of the opposite side from the paralysed side, and this is invariably the case. Recollect then that the mouth is always drawn from the paralysed side, and towards that side where the disease exists in the brain. But when you desire the patient to put out his tongue, do you find that the tongue follows the direction of the mouth? No; it goes towards the opposite side. This appears somewhat paradoxical at first, but is easily explained. The protrusion of the tongue is effected by the action of the genio-hyo-glossi muscles, which are, as you all know, a pair of fan-shaped muscles, attached to the inside of the chin, the middle line of the tongue, and the body of the os hyoides. This diagram will represent it. Here is the muscle of the left side, and here is the right. When the patient puts out his tongue, this left half being paralysed, and having lost its antagonism, the tongue obeys the action of this, the right half, and the fixed point of attachment of the muscle being to the right of the mesial line, the base of the tongue is brought forward, and to the right, and its point consequently deviates to the left or paralysed side. It has been remarked also, that there is some variety with respect to the paralysis of the tongue; some patients can protrude it, others cannot. In some cases too, the patient can put out his tongue well enough, but he cannot employ it in the articulation of sounds, and his speech is quite indistinct.

I might occupy your time for several lectures with these subjects; and, did my time permit, I could lay before you a vast quantity of interesting matter on the subject of paralysis from apoplexy; but, as the number of lectures is limited, all I can hope to accomplish is, to point out the great landmarks to you, and leave the rest to your own study and experience. With respect to paralysis of the extremities, the upper are paralysed more frequently than the lower; and, when both extremities are engaged, the upper are gene-

rally more completely affected than the lower. When a person recovers, also, we find that the lower extremities are the first to regain their lost power and sensibility. These circumstances have been attempted to be explained by considering the particular parts of the brain in which the effusion has occurred; but, as this has not as yet been sufficiently made out, I shall pass it over. I regret, also, that I have not time to enter into the subject of the different varieties of lesion of intelligence in cases of apoplexy. I must, however, observe, that the varieties are infinite, and your trouble will be amply repaid by reading what has been written on this point by Dr. Abercrombie, and Dr. Cooke in his Treatise on Nervous Diseases. You will find in the latter work an extraordinary collection of facts with respect to lesions of the intellectual functions.

I shall now endeavour to get through the treatment of apoplexy as briefly as the important nature of the subject will admit. I shall commence by saying, in the words of Dr. Abercrombie, that the remedies for apoplexy are few and simple. The great point is to relieve the head from the accumulation of blood, to prevent farther congestion, and to obviate inflammatory action; and for these purposes the only efficient means we possess is bleeding. There is no disease in which the efficacy of free and bold depletion by the lancet is more remarkable than in apoplexy. I agree completely with Dr. Abercrombie in thinking that the symptoms which denote serous apoplexy by no means contra-indicate the use of the lancet; for I have already shown, that serous apoplexy was nothing but congestion, that the serous effusion was one of the consequences of this congestion, and by no means the cause of the apoplectic symptoms. Dr. Abercrombie thinks that, in the commencement of the disease, you may bleed where the pulse is feeble as well as where it is strong and full, and gives many important cases in which the disease yielded to a copious abstraction of blood, though the state of the patient's pulse and general system at the time were such as would deter many from bleeding. He gives three cases of persons about seventy years of age, on whom this mode of treatment was practised with success, and another of a person of spare habit, aged eighty years, whose life was saved by a bold and timely use of the lancet. There is also another case detailed of a patient who was worn down and dropsical at the time of the attack, and received considerable relief from bleeding. I do not wish you to conclude from this, that you should bleed as boldly in the one case as in another; what I wish to impress is this, that in the vast majority of cases it is advisable to have recourse to the lancet. With respect to the first bleeding, I think that where the pulse is full and strong it should be large, and such as will produce some effect on the symptoms. This may be repeated afterwards to a smaller amount if necessary; but the subsequent bleedings should be rather local than general, except where there is any renewal of the cerebral and circulatory excitement, which must be always met with activity. I believe the cases in which you must make the largest bleedings are those in which there are symptoms of an hypertrophied heart. But where this is not present, one or two bold bleedings, followed by local depletion of the head, will be sufficient. In cases of apoplexy, you may either open a vein or the temporal artery, for the objections made to arteriotomy in phrenitis do not apply so much to cases of apoplexy. There is no violence on the part of the patient, nor is there the same chance of the vessel giving way. The head should be shaved and freely leeched, and the patient may be cupped on the temples or the back of the neck.

Next in efficacy to general and local bleeding seems to be the administration of strong purgatives. There are many cases on record, in which the coma and other symptoms have resisted bleeding, both general and local, but have disappeared under the influence of active purgation. One of the great objects in the treatment of apoplexy should be to get rid of the coma as soon as possible; and for this purpose nothing appears to answer better than the early use of brisk purgatives. Dr. Abercrombie recommends croton oil as the best purgative that can be employed, and indeed it is an excellent one; but if the patient can swallow, you need not be very anxious about the kind of purgative you prescribe; any active purgative followed by a strong enema will do. Where the patient cannot swallow, you may mix the dose of croton oil with some mucilage, and pass it into the œsophagus by means of a gum elastic tube.

After purgation, the next thing is to apply cold to the head by means of cold lotions, or iced water, or by pouring a stream of cold water on the head. This is a measure of great efficacy, and one which you may employ with safety and advantage.

In cases of apoplexy, where the coma has resisted free bleeding, both general and local, and where purgation and cold applications to the head have been employed without any decided effect, it seems advisable to apply a blister to the head or nape of the neck. You will recollect that I told you that blisters were always dangerous in the early periods of all acute visceral inflammations. This, however, does not apply so much to cases of hæmorrhagic effusion like apoplexy, in which blisters may be employed at an earlier period than in cases of active inflammation. I would advise you, therefore, to use blisters in cases of apoplexy attended by persistent coma, having first put into practice the means already mentioned.

Many persons advise the use of emetics in apoplexy, but the facts bearing on this point, to which I have drawn your attention when

speaking of inflammation of the brain, will also apply here. You may take it as a general rule, that where congestion of the head exists, vomiting will always increase it, and must be therefore exceedingly dangerous. As far as theory goes it is totally against this practice, and I believe experience also is opposed to it. In a number of cases of disease of the brain, where emetics were employed, it has been found that an unfavourable result ensued, and there are some cases of apoplexy on record in which the exciting cause was a fit of vomiting.

Suppose that, after having taken away blood, purged actively, used cold applications, and blistered the head, the coma still remains, accompanied by a feeble pulse and cold skin, what are you to do? I believe, under these circumstances and these alone, you may venture on the use of internal stimulants. Though this is at best but a forlorn hope, still the practice appears rational, we have analogy to guide us in the use of stimulants in such cases, and there are cases on record of persons who have recovered from this state by their judicious employment. The remedies most generally prescribed for this purpose are camphor, musk, and carbonate of ammonia. In the cases of typhus, we know that these remedies have frequently succeeded in removing the coma; but I repeat that you should never have recourse to stimulants until the period for depletion has passed by, and all the ordinary means have failed.

I shall now suppose that we have succeeded in removing the coma, that consciousness has returned, and that nothing remains but paralysis of one side. Our great object is to get rid of the paralysis as soon as possible. Here you will recollect, that you have to deal with paralysis depending on extravasation, a paralysis which, as far as we know, will not disappear under any form of treatment until the extravasated blood has been absorbed. The first thing then you have to do is to adopt measures to prevent a return of the attack. This is to be effected by carefully restricting the patient in his diet, by avoiding all causes of cerebral irritation, whether physical or moral, and by obviating every thing capable of exciting the circulation. But you should not be content with this; you should, from time to time, employ local depletion, which in cases of this kind has a double utility. It tends to prevent a repetition of the attack, and, by lowering the circulation, keeps the brain in that non-inflammatory condition, which is most favourable towards promoting the absorption of the coagulum. In many cases, also, you will find it of great advantage to establish a drain in the vicinity of the disease, and a great deal of good may be done by putting a seton, or an issue, in the neck. You must also pay constant attention to the state of the bowels and urinary system in cases of paralysis; keeping up a steady but mild action of the bowels has an excellent effect, and I need not impress upon you the necessity of paying strict attention to the bladder.

The paralysis, which supervenes on an attack of apoplexy, is to be treated always in the first place by means directed to the head, and the brain is to be put in such a state as will favour the removal of the clot by the means already recommended; in addition to which it will be necessary that the body and extremities should be kept in a warm temperature. But there is this very singular circumstance connected with some cases of paralysis, that a period will arrive when, although the original disease of the brain has been removed, and the clot absorbed, the paralysis still continues. It is not easy to explain this circumstance, but it has been observed in many persons, who have been paralytic, that the clot was completely absorbed, and no existing trace of disease discoverable, such as would account for the continuance of the paralysis. In cases like this, we must adopt a different mode of practice, and have recourse to measures capable of exciting the brain, and we have reason to believe, that whatever will excite the brain and restore its energy (I must use this phrase for want of a better) will cure the paralysis. We find that, in some cases, where the brain of a patient, under such circumstances, has been exposed to any sudden stimulus, whether physical or moral, the symptoms of paralysis have disappeared, sometimes gradually and slowly, at other times rapidly and at once. Now, this disappearance of the symptoms shows that the paralysis did not then depend on the presence of a clot, for if an unabsorbed coagulum remained in the situation of the original extravasation, the paralysis would not disappear. But it has been frequently observed, that a patient, labouring under paralysis, may get rid of his symptoms suddenly, or that, at a certain period, they begin to decline, and then go away altogether. From a consideration of these circumstances we are led to divide the treatment of paralysis of this description into two parts, and endeavour first to excite the brain itself and next the nerves, which supply the paralysed limbs. For this purpose several remedies, supposed to be capable of stimulating the brain, so far as its action on the muscular system is concerned, have been recommended, the most important of which is the nux vomica, or its active principle, strychnine. The researches and experiments of modern medicine have already established the efficacy of strychnine in such cases, but you will recollect, as I before stated, that this powerful remedy can be employed with safety only in cases where the paralysis continues after the disappearance of organic disease of the brain. Until that period arrives, and all symptoms of congestion and excitement are removed, it would be improper to prescribe the use of strychnine. One of the most recent publications on this subject is from the pen of Dr. Bardsley, of Manchester, in which you will find an exceedingly interesting series of cases treated

with strychnine, and many of them with the most decided success. In most of these cases, you will find that Dr. Bardsley, even where the disease has been of some standing, *precedes the use of strychnine by measures calculated to deplete the head*, even though the cases were chronic. Hence, whenever you are about to prescribe this remedy, you should be satisfied that depletion has been sufficiently performed. You may be called to treat a patient for paralysis after an apoplectic attack. Here you must consider how far you are to premise the use of strychnine by depleting measures, and you must also reflect that we here have shadowed out one of the most important principles in medicine, *that in almost all cases where a cure is to be attained by stimulation, it will be effected more readily, and with much more certainty, when preceded by local depletion, no matter how long the disease may have lasted.* The efficacy of strychnine in paralysis seems to be dependent on the antecedence of local or general depletion.

Strychnine being an exceedingly active remedy, and having a most powerful effect in stimulating the brain, it being also one of the accumulative class of medicines, it will be proper to commence its exhibition with a very small dose, and watch its effects with care. The following is the formula which I would recommend you to employ. You take a grain of strychnine, and your object being to divide it into a number of equal parts (say sixteen), to ensure an accurate division, you dissolve it in a small quantity of alcohol, and, having mixed this solution with a sufficient quantity of bread crumb or conserve of roses, you divide it carefully into sixteen equal pills. In this way you may be tolerably certain that each pill contains one-sixteenth of a grain. Begin at first with one pill a-day, next day you may give two, and so on until you have brought it up to half a grain or a grain, watching carefully its effects. Now, what are these effects? They are very analogous to the phenomena produced by inflammation of the brain taking place in the vicinity of the clot, namely, spasms of the muscular system.

It is also a curious fact, that these spasms are principally observed on the paralysed side; in other words, that the portion of the brain which has been affected by disease is more sensible to the stimulus of the strychnine, the consequence of which is spasmodic twitches in the paralysed limbs. The great nicety of practice in the treatment of paralysis in this way, is to keep up a certain degree of this irritation without letting it proceed to any degree of violence, and to omit it whenever the following symptoms become manifest,—headach, giddiness, weakness and sickness of stomach, and too violent spasmodic twitches of the limbs.

There is a great difference with respect to susceptibility of the effects of this remedy in different individuals; in some the effects speedily appear, and you are obliged to intermit its use; others will bear large doses for a considerable time, and you may push the strychnine until a grain or a grain and a half is taken in the day. I have myself given to one patient a grain every day for the space of a fortnight without any intermission. In all cases, however, it will be necessary to watch the symptoms. There is one effect of strychnine which appears to be unfavourable, and whenever it occurs you should either omit the medicine or diminish the dose. Along with or succeeding the spasms, *there is a tonic rigidity of the limbs;* when this occurs you should be cautious in the administration of strychnine. The length of time which it should be continued will of course vary according to circumstances, but you should be aware that it requires a considerable period of time to produce its effects. In all Dr. Bardsley's cases, and in all those treated at the Meath Hospital, it has been continued for a considerable time, certainly more than a month. It is also necessary for you to recollect that strychnine is one of those medicines which are termed accumulative, that is to say, remedies the operation of which, after remaining latent for some time, suddenly explodes with great violence. When this occurs, the strychnine must be immediately given up, and steps taken to controul its effects. One of the best things for this purpose is the carbonate of ammonia with some mild anodyne. I have seen very severe spasms from the use of this medicine. In one case these spasms were so violent as to roll the patient nearly out of bed.

It has been proposed to employ brucine as a substitute for strychnine. Of this remedy I can say but very little; I have given it but very seldom, I believe only in two cases, and in these without any sensible effect. It is much weaker than the former remedy, one-fourth of a grain of strychnine being equal to six grains of brucine. Other remedies have been proposed for the same purpose, among the rest, iodine, which has been recommended by Dr. Mansfield.

The next class of remedies are those which are employed for the purpose of exciting the nerves of the parylysed limb. As my time, however, has expired, I must postpone the consideration of these until our next meeting.

A NEW AND SUCCESSFUL METHOD OF TREATING CIRCOCELE AND VARICOCELE.

BY G. BRESCHET,

SURGEON TO THE HÔTEL DIEU.

Paper read at the Academy of Sciences, January 1834.

Towards the close of the last century particular attention began to be bestowed on the diseases of the vascular system; nevertheless, the researches of physicians and surgeons were almost exclusively directed to aneurisms of the heart and principal arterial trunks; science

possessed scarcely anything on the pathology of the veins. The majority of the affections to which they are liable is but little known even at the present day, and consequently their treatment is very imperfect.

I have been collecting materials for nearly twenty years, in order to compose a Treatise on the Diseases of the Sanguineo-vascular System. I have, however, thought it necessary to precede this work by a correct description of the structure and distribution of these vessels, thus giving more exactitude and elucidation to my labours.

I have submitted to the judgment of this Academy, at different periods, numerous fasciculi in folio, on the anatomy, physiology, and pathology of the venous system.

These researches, which I have pursued with assiduity, will, I hope, throw some light on the diseases of the veins. They have already furnished me with the means of making known an affection of these vessels (phlebitis), to which I had the honour of first calling the attention of practitioners. My labours have excited an emulation, to which is owing the present facility in detecting and treating appropriately one of the most severe and common of diseases.

In a series of papers, which I presented to this Academy, I have described various other diseases of the sanguineo-vascular system. I have successively given, 1st, an Essay on False Aneurism of the Heart, of which I observed an example in one of our most celebrated tragic actors; 2nd, in another, I have given an account of Ectopia, or displacement of the heart; 3rd, I devoted a third to the description of True Aneurism of the Small Arteries found in the Cellular Tissue of Bones; and last year I submitted to the examination of this Academy three papers on aneurism; the first on true aneurism, the second and third on those of a mixed nature. Lastly, in a recent publication, I have described varicose aneurism, or that species which is produced by transfusion, in which I have exposed the mode of treatment and the manner of operating, which my practice in the largest hospital in Paris has made me consider as the most appropriate.

It was in pursuing researches and observations of this description that I have arrived, as I believe, to the discovery of a mode of treating successfully an affection which all pathologists have agreed in considering as incurable. M. Boyer, himself, whose experience was so great and ability so perfect, regarded the varices of the spermatic cord and scrotum (circocele and varicocele) as diseases, the cure of which it was absolutely necessary to renounce.

In 1819 I translated an English work on the diseases of the arteries and veins, subjoining numerous annotations, in which I treated of different affections of the sanguineo-vascular system, which were but little known at that period. It was perused by a celebrated German surgeon and anatomist who was labouring under circocele, accompanied with a voluminous varicocele. He conceived the hopes of finding alleviation to his sufferings; he came to Paris in order to obtain my advice and that of various scientific surgeons residing in this capital; but the efforts of surgery proved vain on this occasion, and it was with regret that I witnessed the departure of this learned fellow-practitioner in a state as pitiable as that which he presented on his arrival. Shortly after his return to his native country he became a victim to his agonies.

Struck with the insufficiency of our curative means, I made numerous attempts at obtaining more favourable results; but, during a long time, I procured simple alleviation much more frequently than a radical cure. At length, at the commencement of last spring, a patient came to implore assistance at the Hôtel Dieu for a very extensive varicocele and circocele, which caused acute pain, and incapacitated him from undertaking any species of toil.

This man had been previously treated by various practitioners, and constantly without success. His grief was so profound that it had thrown him into a state of complete melancholy, accompanied with a desire to commit suicide. When he came to consult me he was resigned to undergo every species of treatment, and, moreover, earnestly implored me to perform the operation of castration in order to terminate his sufferings.

The degree at which the malady had arrived scarcely permitted the slightest hopes of success; nevertheless I submitted the patient to different modes of treatment before I proceeded to the surgical operation; and it was not until astringents, refrigerants, and every species of styptics had been alternately employed, that, yielding to the entreaties of the patient, I considered myself authorised in employing a method to which I had already had recourse, but always with the greatest circumspection—I here allude to compression.

I think it necessary to say a few words on the two varieties which this disease presents, before relating the history of this case. It is well known, that varicocele depends on a dilatation of the scrotal veins, and that we designate by the name of circocele a similar affection of the same vessels belonging to the cord which suspends the testicle, as well as to the epididimis and gland itself.

It is believed that this disease appertains almost exclusively either to adults or old age; but I have much oftener observed it in youthful than in elderly patients, in whom it almost invariably arises from the abuse of venereal pleasures; whilst, in the adult and aged, it is caused by loss of tonicity in the tissues belonging to the parts; the influence of different forms of exercise, such, for example, as equitation, where compression is produced in the vicinity of the inguinal ring; by irreducible hernia; by glandular engorgement; or by the unskilfully applied or badly constructed pad of a truss.

The greater frequency of circocele and varicocele on the left side has been attributed by Morgagni to the circumstance, that the veins of this side of the body empty themselves into the renal veins at a right angle; whilst other pathologists have imagined that this difference arose from the distended state of the termination of the colon, caused by the alimentary residue, and the consequent compression which the retention of this matter exercised on the venous plexus situated behind this portion of the digestive canal.

Whatever may be the cause of these affections, and of their more frequent occurrence on the left side, it is certain that the accompanying inconveniences are not limited to the production of a swelling which is increased by the application of heat, by walking, and every sort of exercise; but they are attended by other symptoms, such as acute sufferings in the course of the spermatic cord, which sometimes becomes so intense as to induce the suspicion of neuralgia of this organ. These symptoms generally resist the employment of every topical remedy, or. else subside momentarily, and shortly re-appear with renewed violence. Time, far from diminishing the disease, only favours its increase; and I have seen in many individuals the scrotal and spermatic veins acquire the size of the little finger, forming by their anastomosis a plexus as voluminous as the fist, or even the head of a young infant, and accompanied by acute pain whenever the gland was abandoned to its own gravity.

The generality of practitioners, considering this malady as incurable, recommend only the employment of a suspensory, and local astringents; some, however, still believing in the possibility of effecting a radical cure have adopted either the ligature or excision of the diseased veins. J. L. Petit appears to have performed this operation in two instances with success. Nevertheless this celebrated surgeon has been followed but by few imitators, many of whom have had to repent of their unfavourable success. The excision and ligature of varicose veins have been frequently performed both in England and in France during the last eight or ten years, but the supervention of numerous accidents caused by phlebitis, and the still more frequent death of the patients, have effected a total abandonment of this dangerous operation. It has been recently recommended to place a ligature on the spermatic artery; by this method the testicle becomes deprived of nourishment, this gland is thus rendered useless, and sinks into a state of atrophy. Lastly, there are some surgeons who have proceeded to the length of advising castration, but independent of the danger of this operation, and the rigorous exaction of a method which deprives the patient of a most important organ, it is evident that this operation is only applicable to circocele, and not in any way to varicocele, or, in other words, to those cases only where the spermatic veins are varicose, and unattended by any morbid dilatation of the same vessels ramifying on the scrotal integuments. This rapid exposition will suffice to demonstate the gravity of the affection, and the incapacity of our aid in the destruction of this malady.

It is, therefore, important to discover a curative agent; and I was occupied in its research, when a patient, whose case I am about to describe, requested my advice. The simplicity of the method which I have detected, would diminish the value of its discovery, if in medicine the remedy was appreciated otherwise than by its result, and if in collateral sciences this recommendation was not considered as its principal and characteristic utility.

I shall limit myself to the relation of two cases only, in which I submitted the patients to this new mode of treatment, and I adopt this in preference, since, having been publicly witnessed at the Hôtel Dieu by numerous practitioners and students, no credulity can be excited as to the nature of the success.

I shall add only that since the cure of these two patients I have attended many others in private practice, the majority of whom are in a more or less perfect state of convalescence. No untoward symptom has ever arrived to complicate this remedial method, and perplex the ordinary course of treatment.

Varicocele and Circocele situated on the Left Side treated by Compression—Cure.

Case I.—Edma Voillot, æt. 29, servant, native of Burgundy, strong and well-proportioned, of sanguineous temperament, perceived at the age of 15, that the right and left testicles presented a difference in conformation, the scrotum on the left side being the most voluminous; a few years after a varicose condition of the veins which occupied this region was subjoined. The comparatively laborious occupations to which this patient was subjected, rendered the presence of this tumour inconvenient; moderate exercise increased its volume, and more than on one occasion he was compelled to adopt its suspension for many successive days. Voillot had frequently consulted the different practitioners residing in this neighbourhood, in order to obtain deliverance from this malady, by all of whom he was dismissed with the reply that it was not susceptible of cure, and with the additional condemnation to a perpetual existence in this state of infirmity. At the expiration of several years, however, he became fatigued of remaining in this condition, and resolved on coming to Paris, in order to consult the surgeons attached to the different public establishments, being desirous of obtaining a cure, even at the risk of life, and consequently resigned, if necessary, to the sacrifice of his testicle; he entered the Hôtel Dieu on the 27th of May, 1833.

Such was the condition of the patient at this epoch; the integuments enveloping the testicle were flaccid, soft, and uncontracted; this relaxation was more apparent on the left portion of the scrotum, which presented divers

knotty, superficial, fractuosities produced by a great number of sinuous and contorted veins, in such a state of dilatation that many of these vessels had acquired the dimensions of the little finger. The testicle did not appear more voluminous than that of the opposite side, but numerous vessels were perceptible on its posterior part, particularly towards the inferior part of the epidydimis, reunited into a considerable, soft, doughy mass, which followed the direction of the spermatic cord as far as the inguinal ring, diminishing upon pressure, which was unproductive of pain. The vas deferens was readily distinguishable amidst these cord-like bodies from its volume, durity, and sensibility.

From these distinct characters it was impossible to mistake the nature of the disease; hence the existence of a varicose condition of the spermatic veins was immediately declared, and this diagnosis became more certain from the absence of all symptoms either of hernia, hydrocele, or any other affection of the testicular parenchyma. When the patient walked a little distance, or remained in the erect position a few hours, unless the scrotum was suspended, not only the tumour of the spermatic cord was considerably increased, but also the veins of these parts became engorged with blood; the weight of the tumour, its volume, gave great inconvenience to the patient, and caused him to experience pain in the course of the spermatic cord. At the commencement, repose was alone recommended to the patient, combined with the local application of linen imbibed with cold resolutive liquids, such as the extract of Goulard diluted with water, solutions of sulphate of iron or alum, decoctions of tan-bark, nut-gall, pomegranate-peel, and Ratanhia-root.

Under the influence of this treatment, which was continued during a month, the scrotal and spermatic veins slightly diminished, but this improvement was only momentary, since, every time that the patient quitted his bed and walked about in the ward, the swelling promptly returned; thus indicating that, in a short space of time, the patient would have relapsed into his former condition.

In compliance with the earnest entreaties of the patient, I put into execution an idea which I had prematurely conceived. I had imagined that the manner, most adapted to the arrival of a permanent cure, was to obliterate the varicose vessels, and it only remained to invent the means to secure success; for this purpose I bespoke several pairs of small steel forceps, which were so constructed as to exercise a constant pressure by the approximation of their elastic blades. But the difficulty experienced in the employment of these instruments, from their compression being occasionally too strong, combined with the inconvenience arising from the impossibility of padding their metallic extremities, which were much too hard to be supported, obliged me to reflect on the fabrication of others, which would permit the adaptation of linen or a pad, and the extremities of which, being approximated by means of a screw, might render the employment of this instrument more easy, and more capable of producing graduated compression.

The application of these forceps was first attested on the veins of the scrotum; these instruments were placed on two of the most voluminous at either extremity, taking care not to leave any considerable anastomosis between the included portions. Their presence induced slight pain in the surrounding parts, and moderate inflammation became manifest, which was easily subdued by emollients, resolutives, and repose.

The forceps, which I employed in the first instance, were improved and their extremities covered with linen. The pain which they produced was much less severe on the second application; their graduated compression determined tenuity, of the skin, and by bringing into contact the two cutaneous layers, a dry cicatrix was formed,—a lamina, solid, thin, transparent, resembling parchment, the fall of which was followed by an ulceration much less extensive and painful than after their first application. These ulcerations became perfectly cicatrised in a few days: they did not produce any flow of blood. As regards the venous cord comprised between the two forceps, it remained filled with concreted blood, and gradually diminished without presenting any inflammatory action; the blood was absorbed, and, at a later period, the vessel left no trace of its existence, either from its colour, its volume, or from the passage of a column of blood.

In this manner I treated successively all the veins of the scrotum which were sufficiently prominent and voluminous to be seized, and thus recognised with satisfaction that this mode of operating had caused the total disappearance of the veins, the volume of which equalled that of the little finger. From this time the patient was able to get up, to walk even without wearing a suspensory, and without perceiving the slightest return of varicose engorgement.

This success, although satisfactory, was not yet complete, as it could not present any real advantage, unless it were capable of producing the same favourable result on the spermatic, as on the scrotal veins; but here many obstacles were offered to the employment of this method; for although the spermatic veins were voluminous, it was much more difficult to embrace them with the instrument, through an integument thick and loaded with fat. It was also necessary to avoid seizing the vas deferens together with the veins; as to the arteries and nerves, their small volume did not permit their isolation. The accidents to be feared were, acute pains, development of violent inflammation, formation of a deep slough, and denudation of the cord.

In this operation the instruments were modified, so as to present more considerable dimensions and a curve of the blades, between

which the existence of a large space was required so as not to compress the summit of the fold. I applied two of these forceps, one as close as possible to the inguinal ring, the other at the commencement of the scrotum, in the vicinity of the inferior part of the spermatic cord. In this instance I took care to carry outwards and backwards the vas deferens, recognisable from its volume, its resistance, and sensibility.

At the commencement, the pain was rather acute, but was alleviated by the employment of local resolutive applications. The instruments remained applied seven days; they produced inflammatory tumefaction of the parts compressed between the two forceps, and, in addition, the compressed part presented a superficial slough, which did not induce mortification of the entire integuments, but an adherence of the two opposite cutaneous surfaces; the ulcerations which ensued were cicatrised in less than fifteen days. Before the expiration of this period, it was easy to appreciate the favourable effects produced by compression on the spermatic cord, which was no longer knotty, and very nearly of its normal volume. Nevertheless, there remained at the inferior part of the epidydimis a considerable aggregation of vessels, knotty, interlaced, ascending as far as the spot where the last compression had been exercised. Two other pairs of forceps were applied, one immediately in front of the testicle, which was pushed backwards, and the other, two inches higher up, with the same precaution as regards the vas deferens. These instruments remained in application for the same number of days as in the preceding operation, and produced, as the others, slight pain, inflammatory engorgement, and sloughing of the integuments.

It is necessary to remark that, after this last operation, the inflammatory symptoms were more intense, and were dissipated less promptly. The forceps applied above the testicle occasioned rather a deep slough, so as to perforate the cutaneous fold, and form on the scrotum a solution of continuity analogous to that which constantly results from the introduction of a seton. The inflammation and tumefaction were comparatively great, and a very abundant sero-purulent discharge continued to flow from the wound during fifteen days, but by means of emollients and repose these symptoms rapidly subsided, and at the same time the varicose parts which were situated at the most depending portion of the scrotum diminished in size, and formed only a small tumour, in which it was no longer possible to discover the slightest trace of vessels.

The disappearance of tumefaction permitted the examination of the testicle, which had been buried during a long time amidst this enormous vascular interlacement, and it was not without the greatest satisfaction that I discovered that the nutrition of the gland was not at all affected, and that this organ presented the same volume as that of the opposite side.

In the month of November the patient was entirely cured; I however requested him to remain a few weeks longer in the hospital, in order to allow me to ascertain if a complete and lasting cure had been effected. During this space of time, the patient got up, walked sometimes all day long; no unpleasant symptom, however, recurred, and he requested his dismissal on the 8th of December.

During the whole continuance of the treatment, this patient was seen by a great number of pupils, who constantly attended my visits and clinical lectures at the Hôtel Dieu, and by numerous practitioners, who were desirous of ascertaining the results of a new mode of treating a malady, generally considered as incurable.

Surprise was naturally excited on perceiving that such a simple method required so long a time to effect a cure; the patient, it is true, remained in the hospital more than six months; it is, however, necessary to state, that a great portion of this period was employed in the construction of instruments, which, without being very complicated, still required numerous modifications before arriving at that degree of perfection necessary to attain with certainty the end proposed, and they are doubtless even now susceptible of many additional improvements.

The second patient who was submitted to this operation, even admitting that his affection was not so far advanced as in the preceding case, proved, by the rapidity with which the cure ensued, that the treatment is less protracted than we should otherwise have been authorised in believing. In first attempts hesitation and imperfection always exist, but which are no longer present when experience has proved the efficacy of the method, and the absence of all danger.

Amongst the persons who followed my visits, and observed attentively the effects of this new method of treating varicocele, was a young foreign physician, who was affected with this malady. After having been thoroughly convinced by his own observation of the efficacy and innocuity of this mode of treatment, he requested my advice, and manifested a desire to be submitted to the same operation as the patient had undergone, whose case I have just related. He was admitted into the Hôtel Dieu, and placed in the ward where Voillot still remained.

Case II.—M. ———, aged 26 years, a foreign medical man, entered the Hôtel Dieu on the 4th of November, 1833, to be treated for a varicose tumour, occupying the left spermatic cord. The patient stated that this tumour had commenced to appear many years ago, after having walked a long distance. He felt pain and tumefaction throughout the whole extent of the spermatic cord; the progress of

the tumour had been more rapid during the last year, when its development was increased from the same cause. In less than fifteen days it acquired the volume of a hen's egg, when it remained stationary, and did not appear to present any change either for the better or worse. The inconvenience and traction produced by its weight had, however, induced the patient to wear a suspensory.

M. ——— being in Paris, in order to complete his medical instruction, had consulted various surgeons of this capital on his disease, which had commenced to excite his inquietude, all of whom, considering the affection as incurable, limited their prescriptions to the employment of local resolutive applications, the use of which was continued during many months without producing the slightest amelioration.

This young physician, attending at this time my visits at the Hôtel Dieu, had an opportunity of observing the case of Voillot, and of following attentively the treatment which was employed, the success with which it was crowned determined him to place himself under my care.

The left side of the scrotum was the seat of a tumour, presenting the dimensions of the fist, situated above, and external to, the testicle, and much inferior to the inguinal canal. This tumour was circumscribed, prominent, and unattended by any change in the colour of the integuments. It was easy to recognise its nature from its peculiar feel. It occupied that portion of the cord which is in immediate connexion with the testicle; it was soft, doughy, formed by tortuous bands, escaping between the fingers, diminishing in size on the application of moderate pressure sustained during a few seconds; less voluminous when the scrotum was exposed to the air, and when supported by an appropriate bandage; becoming, on the contrary, much more apparent after exercise, especially if a suspensory was not worn, and on the application of warm cataplasms. These different circumstances, and in addition the absence of symptoms, appertaining to every other species of scrotic tumour, did not bear the slightest doubt as to the existence of a varicose dilatation of the spermatic veins. Considering it necessary to commence by assisting as much as possible this venous turgescence, I recommended the daily use of a tepid bath, and the constant application of emollient cataplasms.

The tumour having acquired a sufficient development, the vessels being amply distended and engorged with blood, I proceeded to the application of the compressive instruments, already employed on Voillot. I selected forceps, whose branches described the arch of a circle, for the purpose of protecting the tegumentary fold.

I grasped with the thumb and index finger of both hands that portion of the tumefied spermatic cord, which was nearest the inguinal ring, and readily recognised the vas deferens amidst the various organs which enter into its composition, since the volume, resistance, and peculiar sensibility of this canal did not permit any uncertainty in this respect, I was easily enabled to allow its individual escape and press it backwards. Lastly, after having ascertained that it was not comprised between the fingers, which compressed the cord, and having taking the precaution of not permitting the contiguous parts to slip away with it; an assistant, retaining the branches of one pair of forceps separated, applied this instrument on that portion of the fold which was included between my two hands, and afterwards approximated the branches of the forceps by means of a screw, until he had succeeded in exercising on the varicose spermatic veins a moderate compression, sufficient however to suspend the course of blood.

The first pair of forceps being adjusted, a second was applied in the same manner and with the same precautions at the most depending part of the tumour, and as near as possible to the testicle. The space of an inch and a half existed between each pair of forceps.

These instruments thus applied and firmly secured, there still remained some vessels through which circulation might have been carried on; the summit of the cutaneous fold, being protected by the separation of the forceps, consequently was free and uncompressed. In order to equalise the compression, a conical piece of lint was introduced between the skin and branches of the instrument, and, by gentle traction exercised on this substance, the pressure was rendered as forcible and exact as could be desired.

During the day the branches of the forceps were again approximated by moderately screwing the vice at different intervals; the degree of compression on the veins was gradually increased even to the production of a slight pinching sensation. During the evening the patient experienced slight heat in the compressed parts; the pain was propagated even as far as the lumbar region. I recommended the strict observance of a rigid diet, and the continued use of linen imbibed in a solution of the subacetate of lead. These remedies, continued during the whole night, contributed to calm the suffering, which became supportable the following morning. That portion of the tumour which was included between the two forceps was rather hot, florid, and constricted; the points on which the instruments were applied were more painful than the other parts of the tumour. The patient passed the second day in the above described manner.

On the 10th, I thought that a compression, exercised during forty-eight hours, ought to have caused an irritation of the veins sufficient to have produced adhesive inflammation, and to have suspended the circulation. I consequently arrested the compression by the removal of the forceps, but continued for several days the use of local and resolutive applications.

The points on which the blades of the for-

ceps rested presented a more marked degree of inflammation than the other parts: they were surrounded by a small red circle, which circumscribed a very thin slough, interesting only the superficies of the skin. This slight slough, at the expiration of a short time, was replaced by a small ulcer, which required only eight days for its entire cicatrisation.

As regards the tumour, which was at the commencement varicose, red, inflamed, and of considerable size, it did not tarry long in presenting an atrophied and considerable diminution. About the 25th of the month of November, it offered the volume of a small nut, and it was no longer possible to distinguish in its substance any trace of vessels, or to roll between the fingers the nodosities which were previously so apparent. It only constituted a small, homogeneous, consistent, and rather resistent mass.

From this time M. ——— was able to get up and remain in the erect position a comparatively long time, without experiencing the return of engorgement in the parts which formerly presented such considerable development.

At the expiration of eighteen days, the scrotum on the left was not more voluminous than on the opposite side; the cord presented anteriorly, at the point where the tumour existed, a small indolent band, posterior to which was found the vas deferens, still accompanied by a few vessels of the same calibre of those which appertain to the spermatic cord in its normal condition.

M. ——— felicitated himself on his deliverance from this malady after a radical cure, the actual duration of which was about twenty days.

Two cases would not suffice to demonstrate the innocuity and advantage of a new method of treatment, were I not capable of assuring my auditors that I already possess numerous additional facts of the same description, which will shortly be considerably augmented; for, since the adoption of this mode of curing scrotal and spermatic varices has been publicly known, other patients come to consult me daily, this affection being much more frequent than is generally believed.

Many persons have already endeavoured to compare this method to that formerly employed in the treatment of varix; but, on consulting historical works, especially that of M. Le Professeur Richerand, on the Progress of Surgery, it will be seen that the incision, excision, and ligature of veins are not operations unattended with danger. Is it possible to assimilate any method to that which Assilini employed in order to obtain the obliteration of the uterus affected with aneurism? If attention be solely directed to the instrument, it is true that an analogy may be detected, since, as myself, he employed forceps. But Percy, Duret, Ristelheuber, &c., &c., also recommended them in the compression of arteries; but the use of all these instruments has been altogether abandoned. Besides, does there exist any resemblance between this method of operating for aneurism and the means which I employ in the compression of the veins?—Not the slightest. In aneurism, first, the integuments and soft parts which conceal the artery are incised, and immediate compression is exercised; whilst, in the operation which I propose, no sanguineous solution of continuity is concerned; second, the application of the instrument is only of short duration in aneurism, whereas in varix it may be continued during a long time; thus, in the first observation, it was seen that the forceps remained for seven days; third, it is only intended to excite the adhesive inflammation of the artery, whilst, in the cure of varix, this form of inflammation does not appear to suffice; the gradual disorganisation of the vessel and the production of a slough extending two inches in its vicinity are necessary; fourth, this double compression exercised on the course of the veins establishes a marked difference, for it not only assures the cure, but prevents the engorgement of the veins, which would supervene above the point at which the forceps were applied, if this compression were only exercised on one part of their course. It was by not allowing the instruments to remain longer than fifteen or ten hours, that the malady seemed to be apparently cured, and reappeared shortly after the termination of this imperfect treatment.

Gentle compression, which can only induce adhesive inflammation and slight suppuration, would not only be insufficient, but may perhaps prove injurious, since the inflammation may be propagated along the venous parietes and produce phlebitis; or a few globules of pus, or coagulated lymph, may be conveyed into the blood, mix in its circulation, and excite accidents in some part of the vascular system. But by extinguishing, in a gradual and successive manner, the total life of the entire portion submitted to compression, an opposition is created to the passage of purulent globules and coagulated lymph into veins; and it is probable that this mode of operating derives its innocuity from this circumstance. It is also remarkable that the slight mortification and inflammation by which it is accompanied are limited to the surfaces submitted to the instrumental compression.

From the foregoing physiological pathological facts and considerations, it is reasonable to conclude, as it appears to me, that this newly invented manner of treating varicocele and circocele is—

1st. Simple, as regards the instruments employed.

2nd. Of easy execution.

3rd. Suitable to every stage of the affection.

4th. Not liable to expose the patient to danger.

5th. Certain in its results.

ON RUPTURE OF THE PERITONEAL COAT OF THE UTERUS.

BY FRANCIS WHITE, M.R.C.S.,
Surgeon of St. Ann's Dispensary, &c., &c.

Mrs. W——, a highly respectable lady of this city, aged 32, well formed, married fifteen years, the mother of eight living children, had nearly gone to the full period of utero-gestation of her ninth child, when, on the 10th Dec. 1824, she met with some fright that caused her to turn round quickly; she was at the same moment seized with pain in the lower part of her back, which extended round to the abdomen, attended with a sense of faintness and great palpitation of the heart. She recovered soon from the immediate effects of this shock, and being of a very cheerful disposition, and of an active turn of mind, no further apprehensions were entertained, either by herself or those about her, although it was observed she looked paler, and appeared more languid than usual. However, she attended to her domestic affairs until the morning of the 18th, when, on going up stairs, she was attacked with darting pains in the lower abdominal region, attended with a peculiar sensation which she could not well describe; she became agitated, pale, and ghastly. A late eminent accoucheur was immediately sent for, who found her labouring under great difficulty of breathing, threatening suffocation, pain of her heart, pulse quick and fluttering; there was no appearance or symptom of her labour coming on; and, seeing her situation becoming more alarming, Dr. Cheyne was called in in consultation. About nine o'clock, P.M., Mrs. W—— was seized with labour, and, after a few feeble uterine pains, she was delivered of a full-grown still-born male child; but in less than three quarters of an hour she gradually sunk and expired.

In the post mortem examination, which took place in two days after, and in which I was assisted by Mr. Colles, the Senior Professor of Surgery, the following were the appearances which we observed and noted:—

Cavity of the Thorax.—Considerable serous effusion into the right side; on the left, there were adhesions of the pleuræ, and some effusion; the structure of the lungs healthy; the heart empty, its walls flaccid; valves of the arteries without diseased appearances.

Abdominal Cavity.—On opening the abdomen, a large quantity of fluid blood was found in the vicinity of the uterus, the broad ligaments of which were injected with blood; the uterus had not contracted; the right ovarium was much enlarged, and contained two hydatids of considerable size; on the anterior surface of the uterus were two long tears or lacerations, and one of smaller size through the peritoneal coat, and also through a few superficial fibres of the uterus, from which the blood had issued. All the other parts, both of the pelvis and abdominal cavity, were perfectly sound; and, on opening the cavity of the vagina and uterus, nothing was observed except what is usual after parturition.

Such were the appearances which presented themselves to our view. The heart had been emptied of its last drop, and the abdominal cavity filled with almost the entire blood of the body, which had flowed through those three superficial rents.

From the detail of the above untoward and melancholy case, a few observations may be deemed not out of place or inappropriate, and therefore I do not hesitate in submitting them to your impartial consideration.

It will be perceived that the above case was from the commencement involved in obscurity, that it was not attended with the usual characteristic marks of lacerated uterus or injuries of its appendages. There will be found some striking differences between it and the two cases already alluded to, and which might at first view be considered as bearing a strong resemblance to it.

The first case is by Dr. C. M. Clarke, in the third volume of Transactions for the Improvement of Medical and Surgical Knowledge.

"A woman between the age of twenty and thirty was taken ill of her first child at eight o'clock, A.M., attended by a midwife. She went on gradually in regular labour for about two hours, when she was suddenly seized with pain in the abdomen and nausea; great irritability succeeded, with faintness and excessive restlessness; and at half past ten o'clock, P.M., she died undelivered, immediately after which a dead child and the placenta were extracted.

"On examination there were no morbid appearances to be found in the abdominal

cavity, or any of its viscera. The uterus somewhat contracted. On viewing its posterior surface, about an ounce of blood was observed lying in the fold of the peritoneum, where between forty and fifty transverse lacerations were discovered, none of which were in depth more than the twentieth part of an inch, many of them appearing merely fissures, and varying considerably in length from the fourth part of an inch to two inches; they occupied the greater part of the posterior portion of the uterus, and were thinly covered with flakes of coagulated blood. The muscular part of the organ was perfectly sound."

In this case it will be remarked that those alarming symptoms with which the patient was seized, occurred two hours after regular labour had taken place, that she died undelivered, and that the appearances on dissection discovered those slight lacerations in the peritoneal coat merely, the muscular structure not being in the least implicated, and that about an ounce of blood was effused into the peritoneal fold; upon the whole, it is difficult to account for this woman's death; and Dr. Clarke does not account for it satisfactorily, and appears to incline more to the opinion of its being the result of disease, than as the effect of an accident occurring during labour, or being immediately consequent upon it.

The second case is in Dr. Ramsbotham's work on Midwifery, page 409. "A lady who had the previous evening been delivered of her seventh child, after a tedious labour; she gradually sunk, and died somewhat suddenly the following morning. No particular occurrence to excite alarm had happened during labour, nor was there any external flooding. On dividing the abdominal parietes a considerable quantity of blood was observed in the cavity of the abdomen; the viscera generally were healthy; on bringing forwards the uterus, which was well contracted for the time, a rent of several inches in length was discovered in the peritoneal coat, on its posterior surface, extending nearly to the insertion of the left broad ligament, in which the fleshy structure of the uterus did not seem to be engaged."

The fatal result of this case can be fairly attributed to the tedious and difficult labour; and undue degree of pressure of the distended uterus against some portion of the lumbar vertebræ or angle of the sacrum, would account for this extensive laceration in the peritoneal coat.

Respecting this case, I shall merely observe, that it bears a stronger analogy to the one which I have recorded than that of Dr. Clarke's; however, there may be found some shades of difference; first, the symptoms which indicated danger did not set in until after the patient was delivered; and, secondly, the appearances on dissection presented this material difference, that the injury was confined to the peritoneal covering.

Having thus adverted to the only two cases which I have been able to find bearing upon the present subject, I shall now briefly comment upon the case immediately under our consideration. First, then, the injury which led to her death was caused by the exertion occasioned by the fright which occurred some time previous to delivery, and totally unconnected with it; and, secondly, the symptoms denoting such were of so equivocal a nature, as to be calculated to deceive the most experienced practitioner. For though it was almost obvious she was labouring under internal hæmorrhage, yet there were no positive or conclusive symptoms to indicate its having an uterine origin; and, thirdly, as I have before stated, the lacerations penetrated into the muscular structure of the uterus, and, it will be observed, were confined to the anterior portion of the organ.

It is a matter worthy of consideration, whether, if the real nature of the injury had been known, any chance of saving the patient would have been afforded by inducing premature labour and an early extraction of the child, the consequence of which might have been a contraction of the uterus, and, in all probability, a cessation of the hæmorrhage.

In this view I am supported by Dr. Charles Johnson, our Professor of Midwifery, whose experience and scientific acquirements in this particular branch of the profession entitle his opinion to the highest consideration; and who states in a letter to me, on the perusal of this case, that—"Rupturing the membranes, by allowing the uterus to contract, and thus diminishing the calibre of the vessels, might, in your case, have checked the hæmorrhage; but, most probably, would not have altered the event of the case; for we find by Dr. Clarke's case,

that this injury of the uterus may prove fatal without hæmorrhage to any extent. The rupture of the membranes would likewise have been the means of expediting the labour; and we know that the chances of recovering in all cases of ruptured uterus are much lessened if the woman is not immediately delivered."

In conclusion, I have to observe, that there is no subject connected with the practice of surgery and medicine that demands so careful an investigation as the causes of sudden death, which occasionally occur during pregnancy, and which, in my opinion, have been too much overlooked by practitioners. It admits of little doubt, but that, by attention to this very important subject, the profession may be enabled to ascertain, by post mortem examinations, the true nature of such accidents, and thereby arrive at a more accurate knowledge of the mode of treatment. Even if we cannot deduce any practical inference from the case under consideration, it may be valuable by throwing additional light on a subject hitherto involved in obscurity. It is, then, with these views that I have brought forward the present case, in order to encourage the junior portion of our profession to pay that attention to the subject that it so particularly merits.

The following note from Dr. Montgomery throws additional light upon this subject:—

"18, *Molesworth-street, Feb.* 20, 1834.

"My dear Sir,—While listening to the detail of your very interesting paper on peritoneal rupture of the uterus, read before the Surgical Society, it occurred to me that I had met with an account of another case, besides those to which you referred; and, on turning to the notes of my lecture on the subject, I find the following case quoted:—'A patient, during labour, suddenly complained of unusual pain and distress, and presented the most alarming symptoms, without any evident cause. She was, however, safely delivered by the natural efforts of the uterus, but fell into incoherence, jactitation came on, and she died with six hours after delivery.

"'The body was examined next day, and a large quantity of blood was found effused into the cavity of the abdomen. The uterus was firmly contracted, and posteriorly, near its fundus, was found ruptured to some considerable extent. The surface of the rent was covered with portions of coagulum: it occupied a space perhaps as large as a crown piece, but of irregular margins, and surrounded by a reddish stain, giving it, at first view, the appearance of having resulted from ulceration. Near this large breach were *three or four smaller cracks* in its substance. Upon cutting into the cavity of the uterus, it was found that the rupture had not extended into it, the lining membrane being entire throughout, and a considerable portion of muscular substance intervened between it and the external rent, which perhaps had not penetrated more than two-thirds through it. The uterus seemed sound in all other parts of its structure.'

"You will find this account in the London Medical Gazette for August, 1832, p. 630, by Mr. Chatto, and, it might be satisfactory to you to add, it is an additional reference connected with your very important case, and no less judicious observations thereon.

"I remain, dear Sir,

"Very truly your's,

"W. F. Montgomery."

—*Dublin Journal of Medical and Chemical Science.*

NOTES FROM THE CLINICAL LECTURES OF M. LISFRANC ON ULCERS OF THE LEGS.

Production of Ulcers—Their Treatment by the Chloruret of Lime—Means of Consolidating the Cicatrix.

Notwithstanding the careful researches which have been made by Mr. W. Bell and M. Richerand on the subject of ulcers, there still remains more than one void to be filled up, in order to complete their description. Numerous questions have not as yet been resolved, whilst others, which are considered as having been elucidated, again require to be examined.

We may place under the first head the theory of the production of ulcers, which consists in the hypothesis of ulcerative absorption, as described by John Hunter. It is, therefore, admitted that, when an ulcer is formed, the tegumentary tissues are absorbed to the profit of the general nutrition, in the same manner, it is said, as the thymus gland

and liver in the fœtus lose their volume in the course of time.

M. Lisfranc rejects this opinion altogether. According to his views of the subject, absorption does not take place, but there exists an inflammation, which is of a gangrenous nature. A slough is formed, which, on being thrown off, leaves a solution of continuity, and thus constitutes an ulcer. The proof is clear and evident; you will find it (said the Professor) in the works of various authors, although they have not seized its application. Do they not state, that, in general, ulceration commences by erysipelas, or else by a pimple which presents at its centre a small phlyctæna? Open this phlyctæna and a reddish serosity escapes, exposing a slough of the same extent; hence it is unquestionably demonstrated, that cases of this description do not require to be explained by absorption. Moreover, this peculiar species of inflammation, which precedes the commencement of ulceration, is the essential cause of its progress, for as long as the ulcer continues to enlarge, it yields an abundant suppuration, possessing a gangrenous odour, which is readily recognised by rubbing a small quantity of this secretion between the fingers, when it is perceived, that it does not entirely consist of liquid pus, but that it is blended with some solid particles, which are as it were the remnants of mortified parts; finally, it is not rare to find, on attentive examination, the remains of a slough adherent to the circumference of an ulcer. In proportion as the inflammation subsides, and as the ulcer becomes stationary, or as cicatrisation advances, the pus diminishes in quantity, neither mortified particles, nor the traces of slough are any longer found, and the gangrenous odour entirely disappears.

It has been remarked, that ulcers are most commonly observed on the left side, and surgeons have endeavoured to attribute the cause of this difference to the congenital debility of the left extremities. On this subject the Professor thus expressed himself: — "When I commenced my attendance at this hospital the surgical wards contained in general from 40 to 50 cases of ulcers. During the two or three years it required to lessen this system of admission, numerous examples of the above affection came under my notice, and I naturally met with many patients who were left handed, the majority of whom were afflicted with ulcers of the left leg, although it would have been impossible to have alleged as a reason in these cases the weakness of the left side. The real cause of this predisposition is purely anatomical; it is necessary to bear in mind, that the sigmoid flexure of the colon compresses the left iliac vein, in addition to which the pulsations of the two common iliac arteries, which pass over this vessel, communicate a continual shock to the blood contained within its calibre, and thus impedes the return of the fluid. It is this retarded circulation which M. Lisfranc considers as the cause which principally predisposes to ulcers, whether varicose or atonic; he remarked, that a varicose condition is essential to the production of the former; dwelling, however, on the fact, that it is possible to obtain the cure of the most troublesome ulcer by first of all obliterating, by means of excision, the venous trunks which lead to the part, and by afterwards performing the same operation on their principal branches, and the effect is the same in those cases which present an atonic character. M. Lisfranc has admitted into his wards several cases, which, from the extent of the ulcer, and its resistance to ordinary means, appeared incapable of cure, unless amputation was resorted to; he had recourse to excision of the veins, either of the thigh or leg, and the obliteration of these vessels was followed by a perfect cicatrisation of the ulcers.

The treatment of these cases at the hospital La Pitié has undergone very important changes. M. Lisfranc enumerated the indications of cure with his accustomed precision: when inflammation exists he has recourse to emollients, and prefers a revulsive bleeding from the arm to the local application of leeches. When the ulcers are cleansed, if the entire substance of the integuments be affected, and if the margins of the solution of continuity be callous, he endeavours to destroy them by the nitrate of mercury, before attempting to procure cicatrisation, which could not be obtained without great difficulty, whilst the parts remained in a similar condition. As soon as healthy granulations sprout from the suppuratory surface and cicatrisation has commenced, he has recourse to the chloruret of lime, or sodium, which undoubtedly are the best incarnates, as by their employment a solid and perfect cicatrix is ob-

tained in the course of seven, eight, or ten days at most.

It is necessary to estimate the strength of the chloruret, which is easily done by the aid of the chlorometer of Gay Lussac. This instrument should in general indicate three degrees, and the application of the chloruret ought to produce a sensation of itching and heat, which continue from five to six minutes. If it cause pain, or the presence of these inconveniences for a longer space of time, the solution must be diluted with water; but if, on the contrary, it does not produce these effects, it should be concentrated to four or five degrees. The manner in which it should be applied is very simple, the ulcer should be covered with a piece of linen and a bundle of lint, three or four inches thick, which have been imbibed with a solution of the chloruret of lime, and further it is necessary to sprinkle them three or four times a day with this solution. Cicatrisation advances more rapidly in proportion as the ulcer is superficial. M. Lisfranc here directed the attention of his class to an old and obstinate ulcer, resulting from the application of a blister, which had healed in four days.

The cicatrix which is produced by the chloruret possesses this peculiarity, that is to say, it produces a plastic exudation, which is readily perceptible on examining the ulcer sideways; this exudation is organised in the same manner as a false membrane, and cicatrises without retracting, and without drawing the margins of the ulcer towards the centre, as is frequently the case. M. Lisfranc particularly requested his pupils to observe the properties possessed by the chloruret in the foundation of cicatrices, since it is a circumstance which will lead to many important discoveries, if confirmed by future experience. In fact are these tissues endowed with different degrees of retractibility, according to the agents employed in the formation of a cicatrix? The question is proposed without venturing a decision, but the authority of M. Lisfranc would appear to confirm this conjecture, and will doubtless direct the attention of medical men to this important subject.

The employment of strips of adhesive plaster for the cure of ulcers has greatly been extolled. A very favourable opportunity, however, of attesting the superiority of the mode of treatment, by means of the chloruret of lime lately presented itself in the wards of M. Lisfranc.

When this celebrated professor recommenced his attendance at the hospital, after having undergone the operation of lithotrity, he found in St. Anthony's ward two patients suffering from ulcers which had been treated by the application of adhesive plaster twenty-five days; cicatrisation had already covered half of their surfaces. He immediately removed the dressings, and applied the chloruret. In five days the cure was complete, although it is necessary to state that cicatrisation advances more slowly, and with greater difficulty, at the termination than at the commencement of ulcers.

But all is not accomplished after a cicatrix has been obtained; it now becomes necessary to employ those means which are best adapted to prevent its laceration. This has been the aim to which surgeons have constantly directed their attention, although they have always failed in attaining the object in view. Elastic stockings succeed only in very simple cases. When, however, the legs are covered by extensive cicatrices, the patients are in general obliged to return to the hospital two or three times a-year, and are exposed to the supervention of accidents, which occasionally require amputation.

In the year 1813, said the Professor, when I was at Mentz, I was appointed to examine the soldiers who desired to return into France, and to decide on the justness of their demands. Amongst these I found some who had served in the time of the Republic, others who were the veterans of our various troops; all these had, however, sustained their active campaigns notwithstanding the presence of extensive cicatrices on the legs. On questioning them, I found that the majority had these cicatrices from infancy. They said that they had been burnt at this period, but did not know in what manner the cure had been accomplished; all they could recollect was, that they began to walk at a late period, and at first with great difficulty. When I commenced my surgical duties at this hospital, these observations returned to my recollection; I imagined that the cicatrices would be rendered more solid by forbidding my patients to walk for three, four, or six months, as the case required. Experience has confirmed the foreseen result;

many individuals, whose cicatrices ruptured from the slightest cause, and who annually passed six months in bed, recovered the uninterrupted use of their legs. I not only retain these patients many months in the hospital, but am likewise careful in permitting them to take exercise; to select for them some menial occupation about the ward, so as not at first to distress the lower extremities, but rather accustom them gradually to a more violent species of fatigue. I likewise recommend the use of laced stockings made of dog-skin leather, as they unquestionably afford a protection to the cicatrix.

MALIGNANT BLUE CHOLERA.

To the Editors of the London Medical and Surgical Journal.

Gentlemen,—Having observed in your Journal of the 19th instant two cases of malignant cholera, both of which terminated fatally, I am induced to present to your notice the following communication, to which you may perhaps think proper to give a place in your valuable Journal, as a guide to practitioners in the administration of stimulants in this dreadful and appalling disease.

I remain, Gentlemen,
Yours very respectfully,
John Langley.

36, *Tottenham-street, Fitzroy-square,*
July 30th, 1834.

On the 6th of September, 1833, at 5 o'clock A.M. I was summoned to attend a gentleman, who having been a long time resident abroad, principally in tropical climates, had returned to England only a few days, and was residing at No. 4, Charlotte-street, Fitzroy-square; having retired to bed the preceding night in excellent health, was attacked with malignant blue cholera, in its most aggravated form, and accompanied by the most unequivocal symptoms, viz. most violent spasms of the muscles of the body and extremities, amounting to torture, frequent dejections of serous alvine evacuations, impregnated with rice-like matter, without a trace of bile or natural fæculent odour, and alternated with most distressing retchings and ejection of whatever was introduced into the stomach, a death-like coldness and clamminess of the extremities, and diminished temperature of tongue and breath, a tremulous and indistinct pulsation of the radial artery, the secretion of urine suspended, as also that of bile, as evidenced by its absence from the evacuations, with a rapid devastation of strength and vital energy, unparalleled in any other disease, active hæmorrhages excepted. The treatment I adopted was large doses of calomel with opium internally, and frictions of ung. hyd. fort. in the axilla and inguinal regions, with stimulants and effervescent draughts, super-saturated with ammonia; a free and general application of heat and rubefacients externally,—all seemed of no avail; my fluid medicines were discharged from the stomach as soon as exhibited, and I feared death would ensue before the mercurial influence could be established to affect a restoration of the secretory system. I never before, or since, saw the leaden blueness of skin so apparent, or the corrugation of the common integument, the effect of collapse, so obvious.

I made known the nature of the disease, and the unfavourable impression I had formed of its issue to his afflicted wife, and requested some eminent physician might be called in; the choice being left to myself, I selected Dr. Uwins, who visited my patient in four hours from the commencement, and perfectly coincided with me in my diagnosis, and concurred in my treatment, the only alteration being four grains of camphor and two grains pulveris capsici to each dose. He watched the case with me throughout the day, which varied only in its nearer approach to dissolution, and at 11 o'clock P.M. left me in charge of my patient, as he believed and pronounced, in articulo mortis. The desperation of the case seemed to me to call for and warrant extraordinary measures, and that the only chance was to hold death in abeyance, in the hope that mercury, to my view the sheet-anchor in cholera, might let loose the oppressed secretions, and free the nervous system from its deadly embarrassment, the cerebral system throughout maintaining its integrity, as regarded its intellectual function, I had no difficulty in obtaining the administration of the following, the whole of which passed from my own hands, and was eagerly swallowed by the sufferer. It would appear necessary to draw largely upon the credulity of my readers, when I assure them that one imperial quart of

brandy and a bottle of old port, made hot, were entirely consumed undiluted in the space of six hours, my finger remaining the whole time upon the pulseless wrist of my patient, when, with the dawn of morn, I was gratified with the sensation of a pulsating radial artery, and a gradual increase of temperature, to which shortly succeeded a voluntary discharge of urine and fæculent motion, synchronously with which favourable symptoms supervened a profuse salivary secretion; while I had no evidence of re-action or of cerebral excitement, I fearlessly pursued my course, bearing in mind "ne cede malis, sed contra audentior ito." I requested an early morning visit from Dr. Uwins, who expressed astonishment at the existence of our patient, and, with a candour and liberality inseparable from his nature, declared to the patient that to me he owed his life, and, using his own expression, "that I had snatched him é januâ mortis." It is quite evident that, under a natural state of system and normal susceptibility of nerve, the same quantity of ardent spirits, administered in the same space of time, would have destroyed life, and I feel liable to have incurred the censure of having acted rashly and unscientifically, but justify my practice upon the grounds, that the disease was without the pale of scientific or pathological principles. My object in wishing publicity given to this case, is to embolden practitioners in the exhibition of stimulants, which, although palpably fatal in a normal or natural condition of system, during the Lethean torpor and suspense of nervous influence attendant upon this lamentable malady, are comparatively inert.

I beg leave also to add, that, in several other cases of decided cholera, a treatment upon the same principle was usually successful, and where, from the circumstances of poor persons, brandy could not be obtained, I obtained it "propriis sumptibus." In my humble opinion the fatality of this disease is mainly attributable to the want of supporting the sufferer, death gaining the victory before the remedies can be brought into efficient action.

PROFESSOR OF ANATOMY IN TRINITY COLLEGE, DUBLIN.

To the Editors of the London Medical and Surgical Journal.

Gentlemen,—The advertisement inserted in the newspapers, and which was copied into your Journal of the 12th inst., does not state correctly the law regarding the Professorships in the School of Physic in Ireland. It would appear by the advertisement that the Board of Trinity College might, if they had thought fit, have continued the present Professor of Anatomy and Surgery for another period of seven years, without the form of an election; whereas the School of Physic Act directs, that no Professor can hold his office beyond fourteen years, without being again elected to it. It was, therefore, in conformity with this law, and not by any Act of the Board, that the Professorship became vacant, to which I was re-elected on the 29th inst., although the utmost pains had been taken to create a prejudice against me, by grossly false and absurd representations of the evidence I gave before the Parliamentary Committee on Medical Education.

I am, Gentlemen,
Your obedient servant,
James Macartney,
Prof. of Anat. and Surg., Trinity College, Dublin.

Dublin, July 31*st*, 1834.

MEETING OF MEDICAL PRACTITIONERS, QUEEN'S COUNTY.

At a Meeting of the Medical Practitioners of the Queen's County, held pursuant to requisition, at Maryborough, on Tuesday, July 15, 1834, the following gentlemen being present: Drs. Croly, Davis, Joseph Harte, John Harte, Jacob, Lawlor, Smith, and Walsh.

Joseph Harte, Esq., M.D., was called to the Chair, and the following resolutions were unanimously adopted:—

1.—That as it appears to have been one of the causes assigned by the Grand Jury for withholding from Mr. Delaney the usual presentment for his services as Coroner, that he was in the habit of paying excessive fees to medical witnesses for their services on inquests, the practitioners of the county feel themselves called on to state, for the information of that body, the general amount of remuneration to which they consider themselves entitled on such occasions.

2.—That few duties devolve upon medical practitioners, which exercise a more important influence on society,—which require more

anxious investigation and reflection, or higher professional attainments—by which greater responsibility is incurred, or which are more irksome in their nature, than those required of them in their capacity of medical jurists; and that, amongst these, the service on Coroners' Inquests is of all others the most disagreeable.

3.—That we are unanimously of opinion, that the sum of Two Guineas is the very smallest remuneration which any regularly educated practitioner of medicine should receive for his attendance on any Inquest whatsoever. That in cases of homicide, in which the medical witness is bound over under a heavy penalty to prosecute, the sum of Three Guineas should be required, as it frequently happens that professional men, who are compelled, at considerable loss and inconvenience, to attend at Assizes for the purpose of giving evidence, may not be then called on, and consequently receive no compensation. That in all cases of Inquests, where the medical witness is required to attend the inquiry on more occasions than one, in those cases requiring extraordinary labour, application, or loss of time, as well as in cases conducted at any considerable distance from the residence of the medical witness, the amount of remuneration should be proportioned to the services required.

4.—That it is the unanimous opinion of this meeting, that no medical practitioner is, by his connexion with any public establishment, bound, either legally or morally, to give his services on any Inquest whatsoever without remuneration.

5.—That the meeting disapproves, in the strongest manner, of the examination of incompetent or uneducated persons, as medical witnesses on any judicial investigation, even though such a course may be legalised by the loose wording of an Act of Parliament. Such a proceeding can only bring disgrace on those participating in it, deprives the educated practitioner of that to which he is properly entitled, and offers very serious impediments to the attainment of the ends of justice, as has been on many occasions very forcibly exemplified.

6.—That the practitioners of the county should consider themselves bound to support the spirit of these resolutions by every legal means in their power.

7.—That Dr. Smith and Dr. Jacob be deputed to communicate these our resolutions to the Grand Jury.

8.—That Dr. Jacob be requested to have our resolutions printed, and circulated amongst the practitioners of the county, and to forward a copy to the surgeon of each County Infirmary, for the purpose of having them made known to our professional brethren throughout Ireland.

Letters were also received from Drs. Boxwell, Kennedy, Knaggs, Powell, and Tabuteau, approving of the sentiments expressed in the preceding resolutions.

Signed on behalf of the Meeting

JOSEPH HARTE, M.D.,
Chairman.

ROYAL COLLEGE OF SURGEONS IN LONDON.—JACKSONIAN PRIZE.

THE prize subject for the year 1835 is,—The Injuries and Diseases of the Larynx; also of the Trachea; and Treatment.

Candidates to be members of the College, not of the Council; dissertations to be in English, and the number and importance of the facts will be considered the principal points of excellence. Each dissertation to be distinguished by a motto or device, and accompanied by a sealed paper, containing the name and address of the author, and having on the outside a motto or device corresponding with that on the essay. Dissertations to be addressed to the Secretary, and delivered on or before Christmas, 1835. The manuscript prize essay, with accompanying drawings and preparations, will become the property of the College; the others will be returned, if claimed within three years; if not, the sealed papers will be burned, unopened, in the presence of the Jacksonian Committee, the manuscripts becoming the property of the College.

LONGEVITY.

A GERMAN woman, named Betty Branham, died lately in America at the age of 154. When 120 years old she lost her sight, but subsequently recovered it, and, during the last twenty years of her life, could see as well as in her youth.

THE
London Medical and Surgical Journal
Saturday, August 9, 1834.

UNIVERSITY BILL—PETITION OF THE COLLEGE OF PHYSICIANS TO THE PRIVY COUNCIL.

All the world was prepared for the fate of the University Bill for the relief of dissenters in the House of Lords. Notwithstanding the acclamations with which it was carried in the House of Commons, that it would not pass, or, in their customary phrase, that it would be swamped in the House of Lords was most certain. Nor were we at all surprised at the immense majority by which it was thrown out. It was considered, no doubt, a master stroke of tactics to exhibit such an overwhelming force upon the occasion, as would, whilst it displayed the mind of the House of Lords, at the same time deter a repetition of an attempt which met with such a signal failure. The opposition peers mustered in considerable force. Numbers of their lordships, in their zeal against the measure, abandoned the pleasures of the country for a journey to London on this momentous occasion. In consequence, the whole number of votes in favour of the bill merely equalled the opposition present; and the opposition, by proxy, gave a clear majority of above a hundred.

After all, what has been gained by this victory?—Is it the end of the struggle, or is it not rather, what has been well expressed, the beginning of the end? We apprehend we must look upon these empty flourishes and demonstrations of force as mere symptoms of the spirit of the combatants, and a prelude to the vigorous battle that seems inevitable.

In reflecting upon the question thus attempted to be laid, some considerations force themselves upon our attention. Are the English Universities national establishments for the education of the higher or wealthier classes of the people, or are they mere private seminaries for the instruction of a particular priesthood? The advocates for exclusion adopt the latter theory, and are content, for the sake of a paltry victory, to degrade these noble establishments into colleges of priests. They were founded, indeed, at a time when the principles of religious toleration were unrecognised. And, although they have undergone a complete revolution in their religious opinions, they have still retained their original intolerance. But, is it true, that the Universities, the creations of the Crown, are the mere narrow schools of divinity these advocates pretend? We always thought it was the glory and the boast of the Universities that their Colleges were frequented by the great majority of young men of rank or wealth in the kingdom—persons who had no intention to devote themselves to clerical functions—whose sole object was to cultivate those branches of polite learning which are taught in an University, and to associate in their youth with those whom they should find their companions and competitors in the world. From them the Universities exact a ceremony,—the signature of the Thirty-nine Articles, the meaning of which signature it is not for us to define:—but this ceremony excepted, which has no religious meaning *in practice*, there is nothing to exclude the Dissenters, or even the conscientious Churchman, who now hesitates to put his name and handwriting to what he cannot understand, from the honours and advantages of an University degree.

It is well worthy the grave consideration of a patriotic statesman, whether it is desirable or prudent, that those, who mix

in every relation of private or public life, should be separated, by bigotry, in their youth, upon an occasion, and at a time, when prejudices, by which every man is more or less influenced, usually receive their bias. If the object be to keep *the church in danger*,—the usual outcry,—by confederating its antagonists, no better device could be selected than this system of repulsion.

In denying to the Universities the character of national establishments, these same reasoners of course renounced any opposition to the establishment of a national University, which should be open to all persons, without respect to their religious opinions. For if the University renounced that character, it can be no encroachment on their privileges, to bestow the powers of a national University upon a body actuated by national principles of toleration, and offering to students that liberal form of education, which, when defined in the language of Milton, elicited such unanimous cheers in the House of Lords.

It was not denied, that Dissenters laboured at present under certain disabilities by reason of the University system; and it was even conceded to the spirit of the times, that some other means, if they could be devised, should be adopted for the removal of these disabilities. No more palliatives can be expected to satisfy the just pretensions of the Dissenters. The practical grievance may be in a great measure removed, by disconnecting the Universities from the learned professions, or by giving to other and more accessible testimonials the weight attached to a degree:—but the exclusion and the jealousy it creates, and the degradation it implies, remain in all their force.

To H. R. H. the Duke of Gloucester we are indebted for information of a very important nature, touching these proffered concessions in regard to the medical profession. The illustrious Duke, who is the Chancellor of the University of Cambridge, (scarcely any but *Chancellors* took a part in the debate,) whilst he resisted the bill on the pretence of danger to the Church, candidly admitted the injustice of the law which excluded a Dissenter from graduating in medicine in England; but then, continued his Royal Highness, I am authorised, on the part of the University of Cambridge, to consent to the prayer of a petition, presented by the President and Fellows of the College of Physicians to the Privy Council, praying that they may be invested with power to confer medical degrees! This is the first the public has heard of this petition, and of this consent. Now that the fact is unwittingly brought to light by such unquestionable authority, it may not be presumptuous to offer a few comments upon the transaction.

It is plain, then, the Universities foresee they can no longer protect their exclusive manufacture of Doctors for the Fellowships of Pall Mall East, and with a certain degree of adroitness they profess their willingness to forego their claims in favour of the latter body, rather than abdicate unconditionally.

The conduct of the College of Physicians again is an admission, that there should be vested, in some resident body in the metropolis, the power to confer degrees in medicine, a proposition frequently insisted upon in the pages of this journal. That such a body will be created in London there cannot be a shadow of doubt. That a step of so much importance in its intended results to the profession, as the acquisition of that power by the College of Physicians, should be attempted privily, not merely without regard to the opinions and wishes of the profession at large, but

in contempt of a Committee of the House of Commons, which is at the very moment engaged in investigating the state of the profession, for the purpose of recommending to the legislature a scheme for its reconstruction, is an additional instance of the arbitrary and insulting proceedings of the College. Of course the petition has received its proper answer, that its subject-matter is at present under the cognisance of Parliament, and that it is not expedient the Royal Prerogative should be exercised upon the matter.

To the Committee we confidently submit the arbitration of the question, where the power of conferring degrees is to be reposed. Convinced we are, that, unless every thing about the College of Physicians but the name be changed, it would be a most unsatisfactory and dangerous repository of so important a trust — but *nous verrons.*

TEMPERANCE SOCIETIES — DRUNKENNESS—THOUGHTS OF EDMUND BURKE.

It is a common mistake of well-meaning but narrow-minded persons, that every sin is a crime—that every violation of the laws of religion and morality should be punishable by the criminal law of the state. Upon this principle, every persecution has been, and may be, justified. There are some, however, who would be shocked at being supposed capable of applying the principle to modes of faith, who venture, nevertheless, fearlessly to apply it to the constraint of the passions and appetites. We have lately had a striking instance of this moral fervour of legislation worthy of the palmy days of Puritanism. It has been seriously recommended by Mr. Buckingham's Committee on Drunkenness, that Government should introduce a general and comprehensive measure for the prevention of all manner of drunkenness! It is unnecessary to say a word upon so preposterous a proposal, until we see the plan of an Act of Parliament likely to accomplish the purpose better than the Royal Proclamation against all profaneness. Well might Mr. O'Connell say, if the House was to tolerate such absolute trash and nonsense, they would have some small-faced quack from every village in the country breaking down their table with outrageous nonsense.

Among other matters contained in the Report, there is a serious recommendation that *medical venders alone should be licensed to distil ardent spirits, and that foreign spirits should be admitted only for medical purposes!* The showy shop of a modern chemist might be turned into a gin palace at a moderate expense. And as to the effect of this alteration upon the profits of their trade, we apprehend our medical friends would have no objection to the transfer.

We have frequently received pamphlets from Temperance Societies, and if we have not noticed them in our pages, the omission has not arisen from hostility to their objects. On the contrary, we are friendly to every attempt at a voluntary reformation of the habit of spirit-drinking; and if our testimony to the mischievous effects of the practice were wanted, we are willing to give it. We believe these societies have done infinite service all over the world. In America, their establishment has been a national blessing. We observed lately, that the great diminution in the number of ships that passed the Sound was attributed to the diminished production of spirits in the north of Germany. In the upper and middle ranks of this country, the habit of excess in drinking has been for years past reformed

altogether by the progress of civilisation and refinement. In the lower classes, poverty and distress often drive their unfortunate victim to the stimulant of the bottle; but, notwithstanding the splendour and speciousness of the gin palaces, we doubt whether drunkenness is at present more prevalent than in former times. Government is of course warranted in imposing the highest tax it can, consistent with the prevention of smuggling, upon spirits and wines. Every thing else must be left to the gradual improvement of national manners.

The following observations from an admirable pamphlet by Edmund Burke, written at a time when, like the present, the public were deluded by fanciful schemes, may not be unacceptable.

"As to what is said in a physical and moral view against the home consumption of spirits, experience has long since taught me very little to respect the declamations on that subject. Whether the thunder of the laws, or the thunder of eloquence 'is hurled in gin,' always I am thunder-proof. The alembic, in my mind, has furnished to the world a far greater benefit and blessing than if the *opus maximum* had been really found by chemistry, and, like Midas, we could turn every thing into gold. . . . . Ardent spirits is a great medium often to remove distempers, — much more frequently to prevent them or to chase them away in their beginnings. It is not nutritive in any great degree. But, if not food, it greatly alleviates the want of it; it invigorates the stomach for the digestion of poor meagre diet, not easily alliable to the human constitution. Wine the poor cannot touch; beer, as applied to many occasions, as among seamen and fishermen, for instance, will by no means do the business.

"Let me add, what wits, inspired with champaigne and claret, will turn into ridicule—it is a medicine for the mind. Under the pressure of the cares and sorrows of our mortal condition, men have at all times, and in all countries, called in some physical aid to their moral consolations—wine, beer, opium, brandy, or tobacco."—*Thoughts and Details on Scarcity*, *Burke's Works*, vol. iv. p. 284.

CASE OF AXILLARY ANEURISM CURED BY SECURING THE SUBCLAVIAN ARTERY.

BY JOHN LIZARS,

Professor of Surgery to the Royal College of Surgeons, Edinburgh.

On the 16th of April last, I was requested to visit Mrs. Hain, who complained of severe pain in her left shoulder, extending down the arm to the tips of the fingers, accompanied with a very disagreeable, pricking sensation; the pain darted along the course of the nerves, and was much increased by pressure, and the hand after the least movement was affected with severe spasms. Upon examination I discovered a pulsating tumour in the axilla about the size of a man's small fist, and, when applying my ear, I could distinctly hear a thrilling, whizzing noise, or the jarring sound peculiar to aneurism, high up in the axilla, and the skin presented its natural appearance. The heat of the affected arm was considerably greater than that of the other; the pulse was 90, full and strong, and could only be felt when the arm was placed in the straight position.

The patient could not assign any cause for its origin, and first perceived the tumour about ten years ago, when it was very small, and gave her little or no inconvenience, even when engaged at her usual employment, which is that of a weaver. She stated that it had enlarged very gradually, and that, only within the last six months had it increased with any rapidity. About eight days ago, while making her bed, she felt a sensation as if something had given way in the tumour, and in the evening of the same day, she observed that it had become of a different shape, and much larger than on the previous

day. On the same evening she was seized with the severe pain in the shoulder, which gradually extended down the arm to the points of the fingers, and she remarked that since the pain had become so severe in the arm, she found her general health considerably impaired. She was forty-two years of age, of rather a a thin, spare habit of body, and her countenance indicated great bodily suffering.

I ordered cold lotions to be applied to the arm, and enjoined rest, with strict antiphlogistic regimen, but stated to the patient that an operation, in my opinion, was the only remedy. I also requested Mr. Cooper to see the case, who after examining the tumour coincided with my views, and we agreed to request Professor Lizars, of Edinburgh, to perform the operation, to which our patient consented in a few days. That gentleman, on his arrival on the 26th of April, considered the case favourable for an operation, which was accordingly performed on the following day, in the presence of nineteen of my professional friends, among whom were Dr. Ramsay, Mr. Crichton, Mr. Cochrane, Mr. Saunders, Mr. Martin, and Dr. Taylor, of Broughty Ferry. The Professor was assisted by Mr. Alex. Lizars, lecturer on anatomy in Edinburgh, Mr. Cooper, and myself.

The patient was placed on a table, with her head to the light, and her shoulders raised on a couple of pillows, with the head gently reclining over, and the face turned away from the side to be operated on. The affected arm was kept close to her side, and the shoulder brought round towards the mamma. The Professor then made an incision of the integuments at the root of the neck, parallel with, and a little above, the clavicle, from the acromion process of the scapula, nearly to the tracheal margin of the sterno-cleido-mastoideus; he next divided the platysma myoides, and, cautiously cutting, exposed the lower belly of the omo-hyoideus, and the scapular margin of the scalenus anticus, when the subclavian vein presented itself, large and turgid, which was held aside with a curved spatula. In performing this part of the operation, one of the small cervical veins was intentionally divided, and required a ligature. The attachment of the omo-hyoid to the clavicle was also separated. The first rib could now be distinctly felt, together with its tubercle, and the acromial margin of the anterior scalenus, and the axillary plexus of nerves were evident to the eye, but no artery seen or felt. Mr. Cooper immediately remarked that the artery was held aside along with the vein, under the curved spatula. Accordingly, on the removal of this instrument, the artery was seen posterior to the vein, from which it was carefully separated, and a common aneurismal needle easily carried under it; the vessel was compressed on the needle, when all pulsation ceased in the tumour, as also in the arteries at the wrist, so that every one present was satisfied it was the subclavian artery. The ligature was tied with facility with the fingers, and both ends cut away, the lips of the wound approximated with stitches, and covered with lint, previously dipped in cold water. The whole of the operation, from the time the patient was placed on the table, to her being put to bed, occupied ten minutes; there was little or no blood lost—not more than two ounces.

The pulsation in the tumour never returned; but about sixty hours after the operation it could be felt in the arteries at the wrist. The stitches were removed on the third day, as a considerable portion of the wound had healed by the first intention. Two adhesive straps were applied, and allowed to remain on for four days, when the wound had so granulated and contracted as to require no further support, or even dressing. From this period, eight days after the operation, nothing particular occurred; the patient's bowels were kept open with small doses of castor oil; and she was ordered low diet and rest, until all risk of hæmorrhage was past. The ligature has never been seen, and she has felt no pain in the region of the artery, or any where else. The tumour is diminished to one-fourth of its former size, and she uses her arm in her common household work, and intends shortly to resume her usual employment of weaving.

(Signed) James Knight, *Surg.*
Dundee, 83, *Nethergate*,
28*th June*, 1834.

The preceding case deserves to be recorded from the anomalous course of the subclavian artery, for there appears little doubt that the vessel accompanied its vein, anterior to the scalenus anticus muscle, otherwise how did the curved spatula so easily hold the vein and

artery aside? How did we see the scapulary margin of the scalenus anticus, and the brachial plexus of nerves, and feel the surface of the first rib between these, but no artery? Had I not made a clean dissection of the parts, so as to see every organ, and been assisted by an anatomist, I would have still doubted the variation. I have since examined the artery of a few subjects, but a hook or spatula cannot embrace it and its vein in the same manner. Few facts are more valuable to the surgeon than the varieties of arteries. The brachial artery seems to divide so frequently above the elbow joint, that such appears to be the more regular distribution. Tiedemann and Green of Dublin's collections of the varieties of arteries are invaluable.

Edinburgh, 38, *York-place*,
July 22nd, 1834.

DISUNION BETWEEN THE GOVERNORS AND MEDICAL OFFICERS OF GUY'S AND ST. THOMAS'S HOSPITALS.

The respective treasurers of Guy's and St. Thomas's Hospitals have thought proper to quarrel with the medical officers and lecturers in these institutions. Dr. Blundell has withdrawn from Guy's Hospital School, while Dr. Elliotson and Mr. Green have determined to leave St. Thomas's Hospital. The services of these eminent professors are to be lost to the medical students, and to the poor in the above establishments; and another proof is added of the injuries done to the public and the profession by the allowing governors and treasurers to interfere in the regulation of medical teaching, and in the elections of officers to hospitals. We trust that the indefatigable Chairman of the Parliamentary Committee will summon the above distinguished individuals before him, when he will elicit evidence of gross misconduct and jobbing in the affairs of hospitals which demand castigation and suppression. Nothing can be more preposterous than depriving medical science and an immense number of our fellow-creatures of the aid of such experienced medical practitioners.

Foreign Medicine.

Amaurosis from Lead.

Judging from a few facts only, for this variety of amaurosis is not common, M. Duplay concludes, that this disease, when it follows painters' or nervous colic, comes on very suddenly, and almost instantaneously; that it happens only after several attacks of colic, is sometimes isolated, but most frequently accompanied by other nervous complaints; that the only local symptom is dilatation and immobility of the pupil (at least in the case noticed by M. Duplay); that, contrary to the other forms of the disease, it is complete in a few hours; it may continue only a few hours, or may last several months, but it rarely becomes permanent; its duration does not depend on the number of relapses, and it is generally unaffected by the treatment adopted for the removal of the colica pictonum.—*Archives.*

New Operation for Fistula Lachrymalis.

M. Langier proposes a new operation for this troublesome complaint, by piercing the maxillary sinus. He has employed it with advantage, and other surgeons have been equally successful. The incision having been made into the sac in the usual manner, he introduces a small trocar, bent about six lines from the point, into the canal, and, turning the bent part inward, passes the instrument into the antrum with great facility; it is necessary to move it about a little in order to enlarge the opening thus made. The trocar being then removed, the external wound is to be closed. The tears will pass from the nasal canal into the antrum, and through the natural opening of that cavity into the nose.—*Op. Cit.*

Dislocation of the Humerus Upwards and Forwards.

M. Langier has published the history of a case of dislocation of the humerus upwards and forwards, behind the coracoid process; the principal symptoms were, shortening of the arm, projection of the head of the humerus behind the coracoid process, and a depression between the head and the acromion, &c. Numerons and various attempts at reduction were practised, but proved unavailing, as in the case observed by Sir Astley Cooper. The dislocation is very rare.—*Op. Cit.*

British Hospital Reports.

WESTMINSTER HOSPITAL.

CLINICAL LECTURE BY DR. ROE.

Inflammation of the Lining Membrane of the Trachea—Dropsy of the Heart.

Dr. Roe made the following clinical remarks, on Tuesday, on some cases which have been recently admitted into the hospital.

"Gentlemen, before I enter on the subject

of inflammation of the lining membrane of the trachea, I think I should first say a few words in reference to inflammation of mucous membranes generally. The first symptom which strikes us is the increased vascularity of the inflamed parts. In cynanche, the membrane, which lines the interior of the mouth, is of a very red colour, denoting the increased action and vascularity. The sensibility is also very much increased; this symptom is particularly manifest in inflammation of the mucous membrane of the bladder, as also in that of the stomach, which, on such occasions, rejects all food. The inflammation produces infiltration of serum into the cellular tissue, and I have often seen the rima glottidis almost completely closed up in such cases. This is a very dangerous symptom, and always causes a peculiar sound of voice. Some years ago, a woman was admitted here; her breathing was not very difficult, but there was great tenderness in the throat; she died on the following day, and it appeared that the serous infiltration had shut up the rima glottidis, and that the woman died of suffocation. The effusion of lymph is very rare in adults, and indeed it is a matter of doubt whether croup ever does take place in grown up persons. Hæmorrhage in these cases is not necessarily a fatal symptom; I have known many persons who have spit blood fourteen years ago, who are now living in perfect health. Purulent secretions do not take place in the mucous membrane of the trachea, unless the inflammation proceeds to a very great extent. In persons of a naturally healthy constitution this last symptom is not often met with, but it is very common in individuals of a contrary state of the body, and frequently observable in those who have taken much mercury for syphilis.

"——— ———, a man, aged 25, was admitted on August 2nd with quinsy. Three days before he caught cold; the skin was dry and hot; neck stiff; tongue of an erysipelatous redness; uvula relaxed; pulse 120; cannot swallow solids and liquids without difficulty. Active remedies should be resorted to in the early stage; when there is redness and tenderness, leeches should be applied, or general venesection; when the individual is very much reduced, do not resort to general bleeding, but order leeches and medicines; when the tongue is foul always purge; tartar emetic, with saline aperients, may be advantageously used. In order to control the action of the heart, you may exhibit colchicum, which does not produce the unpleasant symptoms which accompany the use of tartar emetic. In this case leeches were applied, and the patient completely recovered.

"Sophia Ryder, æt. 39, admitted Aug. 2, of emaciated appearance, and voice whispering and stridulous; has cough; of an anxious aspect; cannot swallow solid food; tenderness in the throat on pressure. In this case depletion would be decidedly injurious, on account of the debilitated state of the system. I have ordered fumigations of cinnabar and the decoction of bark. On the 4th August I find there is great improvement in the voice. Blisters have risen well. In this case the constitution must be cautiously attended to, and when the system is restored, we may pursue the antiphlogistic plan of treatment."

Dropsy of the Pericardium.

"——— was admitted on July 31st. He has a sallow countenance, very much bloated; skin exceedingly flabby. Has anasarca of lower extremities. Pulsation of the arteries quicker than natural; scaleni muscles constantly called into action; respiration twenty-three in a minute. Cannot lie in a recumbent posture. Palpitation of the heart discovered over six inches of surface! respiration audible; pulse 96; tongue white. Has been in the habit of getting drunk occasionally, and has been accustomed to drink two or three glasses of gin every day. Swelling in the legs, abdomen, and face; breathing louder than natural. On percussion there is a dull sound on the right side of the heart. There is very little difficulty in ascertaining the nature of this disease. There is fluid in the sub-cellular tissue of the thigh; the heart is most probably hypertrophied; his liver is diseased, and he has been considerably injured by intemperance; there is great depression of the nervous system. Our object in this case, gentlemen, is to get rid of the super-abundance of fluid. It is desirable to avoid bleeding if possible. He has been ordered to take a combination of calomel, digitalis, and squills, a most excellent and effective remedy; I have seen a case recover in three days by this treatment. If these fail, we must change our treatment. I cannot help forming a most unfavourable prognosis in this case; if we succeed in removing the fluid, there still remains constitutional ailment, and his indulgence in intemperate habits has caused a diseased state of the system, which is very likely to produce a fatal result. These, gentlemen, are all the remarks which I have wished to make on these cases."

Amputation—New Method.

On Saturday, July 26th, Mr. Guthrie performed amputation, a little above the knee, on a girl who has been for a long time suffering under disease of the knee-joint, which has resisted various modes of treatment. The operation was performed without a tourniquet, in order to save as much blood as possible (the patient being much reduced), and to show the pupils this rather novel mode of proceeding. Mr. Maitland compressed the femoral artery a few inches below Poupart's ligament, and the operation was completed in a very brief space of time. Not more than three or four tablespoonfuls of blood were lost, and the patient bore the operation with comparative tranquillity. Mr. G. left a very large flap,

which amply enveloped the extremity of the bone, and which, notwithstanding some unfavourable circumstances, promises to make a very good stump. This case is invested with more than ordinary interest, in consequence of the appearance of some very remarkable symptoms of nervous irritability, which showed themselves immediately after the operation. Her sufferings, which were apparently most intense, were considerably alleviated by the speedy administration of two grains of the acetate of morphine, which in two hours produced great tranquillity, and removed the unpleasant symptoms. Mr. White remarked that in private practice he was in the habit of using morphine with the greatest success in tranquillising the disordered nervous system. He considered it a most useful and excellent medicine in such cases.

The constitutional health of the patient has been daily improving, and the anxiety of countenance, emaciation of body, and constant pain, which characterised the case previous to the operation, have almost entirely disappeared. She has been ordered a pint of porter daily.

ROYAL COLLEGE OF SURGEONS.

Names of Candidates who received Diplomas during the Month of July, 1834.

H. S. Smith	Bromley, Kent.
A. Taylor	Tower
S. Freeman	Whittlesea, Camb.
T. Sawey Strangford	Co. Down.
H. L. D. Manden	Hull.
G. Tait	Newcastle.
W. T. Rogers	Petersfield.
J. F. Carney	Bonny River, Africa.
J. D. Maples	Spalding.
T. G. Crawfield	Wexford.
T. M. Fishbourne	Holly Mount, Carlow
R. R. Anderson	Houghton-le-Spring
G. Dickie	Cherry Vale, Aberd.
H. W. T. Ellis	
J. Gay	Wellington.
R. Gray	Trevor--square, Brompton.
W. Bridon	Camberwell.
W. Shortliff	London.
R. L. Harrowen	R.N.
W. Hardy	Bombay.
T. K. L. Walker	
J. Lapper	St. Germains.
A. Prideaux	Plymouth.
C. J. H. Ray	Kensington.
W. B. Gilgeous	Demerara.
W. H. Billott	Stockport.
D. Barker	Brandsale, Yorks.
A. Hawthorn	
J. T. Gillman	Bennett's Grove.
W. H. Allman	A.
F. Elliott	Kilrush.
T. F. Oliver	Bath.
R. D. O'Flaherty	Dublin.
C. C. Easton	
H. Bullock	Melton Mowbray.
S. Davidson	Tarres, Aberdeen.
T. Stone	St. Thomas's Hosp.
T. N. Tomkins	London.
H. J. Hopkinson	Burlington.
W. S. Comberbach	Rington-Elwin.
T. L. Jones	Llanrwst, Denbigh.
G. Galland	A.
H. A. Bryan	Barnstaple.
L. Davies Newport	Morren.
R. Thompson	Bury St. Edmunds.

APOTHECARIES' HALL.

Names of gentlemen to each of whom the Court of Examiners granted Certificates of Qualification, Thursday, July 31st.

Alexander Brewer	Newport, Monmth.
Charles Thomas Carter	Newcastle-upon-Tyne.
James Wallworth	Hull.

METEOROLOGICAL JOURNAL.

MONTH. July, 1834.	Moon.	Thermom.			Barometer.		De Luc's Hygrometer.		Winds.		Atmospheric Variations.		
31 Aug.		65	69	64	29·52	29·53	85	82	E.	E.	Rain	Rain	Fine
1		69	72	63	29·57	29·59	79	82	S.S.E.	N.N.E.	Fine	Fine	——
2		70	74	59	29 60	29·61	80	76	N.	N.	——	——	——
3		65	71	63	29·61	29·61	70	72	N.N.W.	W.N.W.	——	——	——
4		66	72	63	29·63	29·63	73	75	W.	S.	Cloudy	——	——
5		70	72	63	29.58	29·58	75	73	S.	S.	Fine	——	Ovcast.
6		68	71	60	29·58	29·62	73	76	S.W.	S.W.	——	——	Fine

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THE

London Medical and Surgical Journal.

No. 133. SATURDAY, AUGUST 16, 1834. Vol. VI.

LECTURES

ON THE

PRINCIPLES, PRACTICE, & OPERATIONS OF SURGERY,

BY PROFESSOR SAMUEL COOPER.

Delivered at the University of London, Session 1832—1833.

LECTURE CII., DELIVERED MAY 6, 1833.

Gentlemen,—I will begin this evening's lecture with a few remarks on scirrhus and cancer of the penis. The disease may commence on the glans, or the prepuce, and afterwards not only involve both these parts, but extend its ravages much further, so as to cause excessive induration even in the corpora cavernosa themselves, and sometimes to destroy the greater portion of the penis, by a process of malignant ulceration, as high up as the pubes. Mr. Miller lately sent to our Museum a fine specimen of scirrhus of the penis, in which the corpora cavernosa and septum penis are involved, taken from an old man, who was under my care as a patient of the Bloomsbury Dispensary, and whose water I used to draw off daily for some time before he died. At certain times he suffered acute pain in the organ, which was much enlarged, and the hardness of which was very remarkable. His great age, the state of his prostate gland, and the diseased condition of his bladder prevented me from proposing the removal of the penis. He died, indeed, from a complication of diseases, and not exactly from scirrhus of the latter organ. The specimen of scirrhus of the penis, now referred to, is, I believe, the only one at present in the Museum of this University. In many instances the disease originates in the form of a warty induration, either on the inner surface of the prepuce or on the glans, and it may continue in this state many years, without much change, though more generally it is soon followed by ulceration, the discharge of a thin peculiarly offensive ichor, and the formation of a malignant sore with hard everted, or contorted, edges. In the case of the old man, to which I have alluded, the disease had existed a very considerable time, without getting into the ulcerative stage. The late Mr. Hey, of Leeds, took particular notice, that, in many instances of cancer of the penis, the patients had a natural phymosis; for, in eight out of ten examples, which he attended, this was the case. The observation was corroborated by the reports of M. Roux, of Paris; yet, gentlemen, I would not have you suppose that cancer of the penis is always joined with, or preceded by, phymosis. Mr. Hey does not mean this inference to be drawn, but only that the two things are combined in a large proportion of cases. I have seen several instances in which there was no phymosis. My friend, Mr. Travers, though he never saw a Jew the subject of cancer of the penis, operated on a man, who had been cut for phymosis ten years before, in whom a pimple on the side of the frænum ulcerated, and assumed the form of cauliflower fungus, completely surrounding the glans, while the latter continued sound.

I can conceive, gentlemen, one reason why many of these cases are combined with phymosis, which may not in every instance be natural, or congenital, or have existed previously to the other disease. When a cancerous affection begins on the inner surface of the prepuce, or when a cauliflower induration exists either there or on the glans, the irritation of the prepuce, arising from such a cause, may lead to a swelling, thickening, and enlargement of that part, just as we know that common warts, in the same situation, frequently do. Yet I would not say, that congenital phymosis may not possibly predispose to cancer of the penis, as Mr. Hey suspected; and undoubtedly those who have a long prepuce, and neglect cleanliness, are more liable to disease within that part than others, whose foreskin is short. The next thing, gentlemen, which I may notice is, that, sooner or later, after scirrhus or cancer has begun in the penis, the glands in the groin enlarge, and the ravages of the disease may gradually extend from the extremity of the penis to the pubes, and have a fatal termination. Be careful, however, not

to confound other ill-conditioned, or fungous, diseases of the penis with cancer. I should say, with Mr. Travers, that whenever the disease begins as an irritable pimple of the glans, or prepuce, and this breaks into a spreading ulcer, with an indurated base, and a disposition to throw out a fungus, the case must be viewed with great suspicion, whether the glands in the groin be affected or not, particularly if the patient has passed the age of fifty.

Gentlemen, after observations on the nature of cancerous diseases, so often repeated in these lectures, you do not need to be informed, that the only chance of freeing a patient from a cancerous disease of the penis depends upon a timely removal of the affected portion of the organ with the knife. The earlier this is done, the greater the prospect of success; for, when the inguinal glands are also affected with scirrhous induration, the operation is too late. Trivial sympathetic swellings of those glands, however, are not accounted by every surgeon a just prohibition of the operation, though the discrimination of such enlargement from one of a truly scirrhous kind is by no means easy. One thing has been fully proved by repeated experience, namely, that the patient is not certain of not having a return of the disease, though the operation may be done at a period when no glandular enlargement exists. When the disease returns, it may either re-appear upon the stump, or in the shape of cancerous buboes in the groin, which, after a time, often bleed profusely, so as to bring the patient very quickly to his doom.

The removal of the diseased portion of the penis, gentlemen, is one of the most simple operations in surgery,—one that does not require demonstration in the morning lectures: it consists in making a circular incision through the integuments, and then cutting through the corpora cavernosa, urethra, &c., directly in front of the retracted skin; of course, you must take care to make the incisions at a moderate distance from the highest point of the disease, so as to be sure to leave none of it behind. It has sometimes happened, that a difficulty of passing the urine has followed the operation, in consequence of the skin overlapping the orifice of the urethra. To avoid this inconvenience, Mr. Hey recommends a small longitudinal cut to be made in the integuments, close to the mouth of the urethra; though it appears that he occasionally did what many others before his time have done, namely, he introduced a bougie, or catheter, for the purpose of keeping the orifice of the urethra from being obstructed. This practice is not, however, considered by all surgeons as truly necessary, and undoubtedly the presence of an instrument is a source of pain and irritation. Yet, gentlemen, you will find in the records of surgery facts completely proving, that a troublesome stoppage of the urine may arise from obstruction of the orifice of the urethra after this operation. Some of these cases have required an incision for the removal of the impediment. When a cancer is restricted to the prepuce, do not think of taking away the glans.

I come, in the next place, gentlemen, to *diseases of the prostate gland.* A swelling of the prostate gland may be of very different kinds, and depend upon a variety of causes: thus, it may originate from *common inflammation of the part, abscesses, calculi within its substance, a varicose enlargement of the veins in its vicinity, or a chronic alteration of its texture,* by which its shape, size, and consistence are very materially affected. This latter case, though attended with great induration of the part, and often termed *scirrhus,* is different from any cancerous affection, not betraying any disposition to affect the lymphatic glands, or to communicate a truly scirrhous form of disease to other textures and organs. The gland itself, when examined, does not present the texture of scirrhus, but is a dense compact, nearly homogeneous substance. Whatever danger attends it (and great danger does frequently accompany it) proceeds from the difficulty of passing the urine, and its injurious effects on the bladder and kidneys, to which such state of the prostate gland, when far advanced, inevitably leads. The prostate gland, besides being liable to the several affections which I have mentioned, is also subject to scrofulous disease and abscess; and perhaps when you meet with a chronic enlargement of it in a young person,—one under the age of 30 for instance, you will have reason to suspect the affection to be scrofulous; for the other chronic enlargement, to which I have adverted, rarely happens in persons much under fifty.

With respect to *acute abscesses,* I believe they are generally formed around, or in the vicinity of, the prostate gland, and not in its substance. They may occur, however, in the cellular tissue, between its lobes. Most of the examples, which I have seen, followed suddenly suppressed gonorrhœa, or were produced by the irritation of strictures in the urethra. They interfered seriously and urgently with the evacuation of the urine; and consequently required free and prompt incisions for the discharge of the matter. Sometimes they burst into the urethra, or make their way out in the perinæum. I may state to you, gentlemen, that all inflammatory complaints about the neck of the bladder and the prostate gland generally cause more or less difficulty in passing the urine; and such is the ordinary effect of abscesses in this situation. In the early stage of these cases, you should employ every means in your power, calculated to prevent the inflammation from advancing to suppuration; and, for this purpose, it is scarcely necessary to say, you should apply leeches freely to the perinæum, bleed from the arm, administer calomel, and brisk purgative draughts, and employ fomentations, or even the warm-bath. But directly you find that matter has formed, the sooner you practise an incision the better.

With regard to *prostatic calculi*, you know they are composed of phosphate of lime, their size varying from that of a pin's head to that of a nut. Sometimes they pass into the urethra, and are discharged. When they cause much annoyance, and can be felt from within the rectum on the finger being introduced into this bowel, they should be removed by making a suitable incision into the gland with the aid of a staff. When they project into the urethra, a similar operation will be required. If possible, they should always be extracted without actually cutting into the bladder itself. The disease of the prostate gland, most interesting to the practical surgeon, is a *slow hardening* and *enlargement* of it, by which its bulk is sometimes enormously increased, from that of a chestnut, its natural size, to that of a large orange, or even a melon; for it has been known to attain the magnitude of fifteen times its natural size. The museum of this institution, gentlemen, is particularly rich in specimens of diseased prostate gland, and, indeed, of the bladder and urethra likewise. Here is a preparation exhibiting the bladder with the prostate gland, not only much enlarged, but torn or fissured by the repeated attempts of the surgeon to get the instrument into the bladder. In this instance, small calculi are lodged in the bladder in the depression behind the prostate; and we learn from the history of the case, that an abscess had formed between the bladder and rectum, which burst by an opening which is still discernible into the former of these organs.

Gentlemen, I have already told you, that this chronic enlargement of the prostate gland is most common in the decline of life, at which period there is a natural tendency to it, such that, in persons of advanced age, I may say, that this part is always increased in size. The alteration of the prostate gland does not usually render the contiguous portion of the urethra narrower, in the manner of a stricture, but compresses the sides of that canal together, and either bends it more suddenly upwards, pushes it to one side, or turns it in spiral or other diversified modes. These facts enable you at once to understand why this disease of the prostate gland should render the patient liable to retentions of urine, and why he should have symptoms and complaints very similar to those of stone.

Gentlemen, I have said that the urethra may not be rendered narrower: it may next be remarked, that it has been known to be widened. Thus, Mr. Brodie has recorded a case of diseased prostate gland, where the urethra was dilated into a sinus, capable of holding two or three ounces of urine. The urethra, however, is generally more or less compressed and distorted, at the same that it bends more suddenly up into the bladder. In consequence also of the prostate gland acquiring an increased magnitude, the prostatic portion of the urethra must necessarily be lengthened; and this may happen in such a degree, that the urethra will be two or three inches longer than natural. Frequently the gland is more enlarged on one side than the other; a circumstance that gives more or less obliquity to it. As the principal part of the prostate gland naturally lies below the urethra, you find that the greatest part of the swelling occupies the same place. In many of these cases, there is a swelling of a portion of the gland, just behind the vesical orifice of the urethra. Such a swelling may act like a valve at the neck of the bladder, and you may see many preparations, where it actually constitutes a large prominence in the bladder, attended with the effect of mechanically forcing the urethra forwards towards the pubes, and of obstructing the passage of instruments, or of preventing the surgeon from readily touching with a sound a calculus situated behind and below it. In the preparation, to which I now invite your attention, you see that the prostate gland is irregularly enlarged, and that one part of it projects into the bladder, so that it was wounded in the attempts to introduce the catheter. You may observe also small calculi adherent to the inner surface of the bladder. In many of these cases of enlarged prostate, there are calculi in the bladder: in one preparation before us, you may notice several calculi, forming a very serious complication of the other disease.

This chronic enlargement of the prostate gland comes on slowly and insidiously, not indeed exciting attention until the size of that organ generally, or of the third lobe in particular, begins to bring on first a frequent desire to make water, and occasional tenesmus, or uneasiness about the rectum, followed, after a time, by more or less difficulty of voiding the urine. There is not only pain in making water, but a desire and straining to discharge more, after the bladder has been emptied as far as it can be. The muscular coat of the bladder being obliged to exert itself very frequently, and having a mechanical obstacle, as it were, to overcome, becomes of course considerably thickened. In fact, in an early stage of the disorder, the patient finds that he is obliged to make a greater effort than usual to get the urine to flow; he is compelled to strain a good deal to make the urine escape, but when once the first difficulty is surmounted, the contents of the bladder pass out tolerably well. However, in proportion as the diseased gland continues to increase in size, the difficulty of passing the water also increases; more straining is always required, and at times there is a complete or incomplete retention. No doubt, gentlemen, in a great number of instances, the projection of the third lobe, as it is sometimes termed, just behind the vesical orifice, has a mechanical effect in obstructing the discharge of urine; and probably it is when such prominence begins, that the inability to empty the bladder with perfect facility is first experienced. Here,

gentlemen, is a diseased prostate gland, exhibiting that stage in which the posterior portion of the prostate begins to project, and the infirmity I have specified to be seriously felt. In one preparation before us, you see the projection resembles a nipple in shape; here is another, in which it represents a complete ridge. The bladder is enlarged, and a pouch formed in it. Sometimes when the third and one of the lateral lobes project considerably into the bladder, their surface has an irregular ulcerated appearance, and on this account the patient suffers aggravated pain in expelling the last drops of urine, as well as distressing attacks of spasm at the neck of the bladder, symptoms also noticed in cases of stone. An ulcerated state of the projecting portion of the gland will also explain to you the great disposition to hæmorrhage, that is exemplified in some of these cases on the introduction of a catheter.

In all advanced cases, the patient is annoyed with distressing irritation about the rectum, tenesmus, flatulence; and a desire to go to stool often takes place so suddenly and irresistibly, that it is with great difficulty he can reach the proper place for relieving himself.

Generally, the patient voids large quantities of a viscid ropy mucus from the urethra; this fluid was supposed by the late Sir Everard Home to be derived from the prostate gland itself. No doubt a great deal of it is secreted by the inner coat of the bladder, which sometimes becomes the seat of inflammation. Here is a preparation, exhibiting an enlarged prostate and an inflamed bladder.

In a considerable proportion of these cases, after a certain period, not only is the muscular coat of the bladder very much thickened, but the inner coat protrudes between the muscular fasciculi in the forms of cysts, or little sacs. I would have you recollect, then, that a *sacculated bladder* is a frequent complication of enlargement of the prostate gland. Now these cysts may also include calculi, of which you see specimens on the table, and instances have been known, in which the cysts were filled with pus. But this is not all the mischief resulting from disease of the prostate gland; for, amongst other bad consequences, you should know that the complaint, by deranging the functions of the urinary organs, may bring on, and frequently does bring on, a morbid enlargement of the ureters, and fatal disease of the kidneys.

Gentlemen, it is well known to every surgeon of experience, that several of the symptoms of diseased prostate gland are like those of stone in the bladder; but that, in the former case, the patient is able to bear exercise, and the motion of a carriage much better than in the latter disorder. In a case of stone, there is also less tendency to retention of urine, but a greater disposition to paroxysms of violent pain in the hypogastric region, and to the discharge of blood with the urine after exercise. Patients with disease of the prostate gland, I have said, bear motion better than those who are afflicted with stone. I occasionally visit an old gentleman, who has long had a considerable swelling of the prostate gland, yet, except at periods when he is laid up with retention of urine, he is able to walk into the city almost daily. In all doubtful cases, the state of the prostate gland should be examined from the rectum, and the patient sounded.

We have, in the museum, as I have said, numerous fine examples of diseased prostate. Here is one, in which you see, besides the enlargement of this organ, a considerable thickening of the muscles of the ureters, as they are sometimes called, likewise sacs formed by a protrusion of the inner coat between the fasciculi of the detrusor urinæ, from one of which sacs a calculus had been extracted. In this other specimen, you observe, that the prostate is very much increased in size, while the muscles of the ureters form a ridge adapted to give lodgment to calculi. The third lobe is here dissected. In the next preparation, you see the bladder of an old man, who died of retention of urine. The prostate is vastly enlarged, its lateral portions rising up, and its naturally posterior part projecting forwards; whereby the course of the urethra was so altered, that no instrument could have been introduced, unless it had been forced through the substance of the gland.

An enlarged prostate is an awkward complication of a case of stone, not only because it sometimes carries up the neck of the bladder almost above the pubes, and removes the cavity of that viscus very far from the perinæum, but because it often creates a serious impediment to the passage of a staff. In the preparation which I now hand to you for examination, you see that the surgeon, in preparing for lithotomy, actually pushed the staff through the gland.

Then another instructive preparation is what I next show you; it is a bladder with diseased prostate gland, and four calculi in the former viscus. The third lobe is enlarged. In trying to introduce the catheter, the surgeon forced it between the bladder and rectum; abscesses followed, and the patient died.

I do not know, whether disease of the prostate usually produces a tendency to disease of the rectum; I suspect that it does, more especially hæmorrhoids. Here is a diseased prostate, complicated not only with a thickened sacculated bladder, but with stricture of the rectum.

I have already informed you of one occasional effect of disease of the prostate, namely, a vast dilatation of the ureters. Here is what is called in the museum catalogue a tuberculated enlargement of the prostate gland, and you see that the months of the ureters are remarkably widened.

The diseased prostate, next presented to your notice, was taken from a patient who died of retention of urine. There is, in this instance, a fungous mass projecting from it into the bladder. I think it is stated, that the prepa-

ration also affords a specimen of the anatomical lusus of three ureters.

With respect to the treatment of the chronic enlargement of the prostate gland, occurring in persons above the middle period of life, I may say, gentlemen, that it is an organic disease, for the removal and complete cure of which no surgeon possesses any effectual means. Yet, notwithstanding this disagreeable truth, it is some consolation to know, that surgical assistance is often of essential service; and this not merely by obviating some consequences, which would be likely to abridge the patient's life, and even cut him off very abruptly, but by rendering the usual inconveniences of the complant much more bearable than they could otherwise be. By the due regulation of the stomach and bowels with alterative and aperient medicines; by directing the patient to avoid sitting long at table after dinner, and not to expose himself to wet cold weather, you will render the stoppages of urine much less frequent, and materially diminish the annoyance from tenesmus, flatulence, &c., ordinarily experienced by patients labouring under the disease. Setons and issues in the nearest part of the perinæum to the prostate gland have been tried. I have, indeed, seen such practice adopted without any benefit; and the same observation applies to various internal medicines, with respect to their power of reducing the swelling of the gland, especially iodine, mercury, and hemlock.

Gentlemen, I think you will not often find a retention of urine, arising from this disease of the prostate gland, yield to the warm bath, opium, or hyoscyamus; and the reason of this fact seems to be explained by the consideration that the obstruction is less of a spasmodic nature, than of a mechanical description. Local bleeding is occasionally serviceable, and, as a degree, spasm may, and probably does contribute with the mechanical effects of the disease on the urethra to prevent the discharge of urine. I conceive, that the surgeon ought not entirely to neglect the trial of the warm-bath and narcotic medicines, but not to place much confidence in them, nor to defer the use of the catheter but for a short period. If these measures fail to bring about the evacuation of the urine, they may still be beneficial in making the introduction of the catheter more easy. Generally you will find it most advantageous to resort to the catheter early, because a prompt discharge of the urine is the only method of preventing the well known ill effects of a forcible distension of the bladder. The bladder itself does not usually burst in these cases, even if the water be not discharged, though such an event is possible; but the constitutional disturbance increases, the action of the kidneys is interrupted, the inner coat of the bladder inflames, and the patient dies comatose. I have seen examples, in which, when the water was drawn off, it had a completely purulent appearance, and no recovery followed; and Mr. Travers has seen two cases of long retention of urine from disease of the prostate gland, where the mucous membrane lay like a slough, loose in the bladder.

Gentlemen, one piece of advice which I shall next offer you, is to let the silver catheter, used in these cases, be one of full size, greater length than common ones, and rather more bent upwards towards its beak. In some cases, in fact, you will require one thirteen or fourteen inches in length, for a shorter one will not reach the bladder. The late Sir Everard Home, who had considerable experience in the treatment of disease of the prostate gland, preferred elastic gum catheters, so constructed that they retained a particular curve, even when the stilet or wire was withdrawn from them. These he used sometimes to leave in the urethra several days, for they were calculated to bear warmth and moisture better than other common ones of the elastic kind. And, for the purpose of retaining them in the passage more surely and conveniently, a catheter bracelet was employed. A flexible catheter should be preferred to a silver one, when you deem it most advantageous to keep the instrument any time in the passage; for it will remain there with much less annoyance than a metallic one. But, on the other hand, you will sometimes be able to pass a silver catheter, when you cannot succeed with one made of elastic gum, which, unless the wire be of unusual thickness, has not always sufficient firmness to overcome the impediment arising from the compressed state of the urethra, or the alteration of its course. In these cases, whatever catheter be employed, it generally passes as far as the anterior portion of the prostate with perfect facility, and here its beak is stopped, sometimes partly by the compressed state of the urethra, but chiefly by the new curvature of the passage, which we cannot always get an instrument to follow. In fact, there are few instances of considerable enlargement of the prostate gland, without the urethra included in it, being propelled forwards and upwards, or to one side, or twisted in various ways. Perhaps, where the passage is tortuous, an elastic catheter is the most likely to find its way; and this instrument has one particular advantage over a silver one, deserving to be well remembered in practice, namely, by withdrawing the wire, at the period when you are trying to make the instrument pass the obstruction, you are able suddenly to increase its curvature, and thus to succeed in getting it into the bladder, when no inflexible catheter can be introduced.

Generally, in these cases, it is necessary either to leave the catheter in the urethra, or to draw off the water once or twice a day, according to circumstances, removing it directly after each evacuation. These plans are to be continued until the patient regains the power of expelling the urine himself. When the case is such that the introduction of the catheter is always difficult, the wisest plan, after getting

the instrument into the bladder, is to keep it introduced for a few days, and, as soon as the patient can empty the bladder by his own power, it may be withdrawn. An elastic gum catheter, if it can be passed, should here be preferred. I advise you, gentlemen, always to be provided with catheters of various kinds, diameters, lengths, and curves, and one improvement made by Mr. Brodie I consider entitled to commendation, namely, that of having the handles of the wires of elastic catheters made large, like the handle of a staff; for thus you acquire a greater command over the instrument, and can guide its beak more according to your wishes. I approve also of the wires being thicker than those in common use, and of the plan of keeping some catheters prepared to retain their curvature, after the wire is taken out of them.

The gum catheters which this gentleman prefers, are mounted not on small flexible wires, but on strong iron stilets, having the curve of a silver catheter. The stilets of the larger ones have flattened iron handles, resembling those of common sounds. Let your gum catheters be kept thus prepared for a considerable time before they are wanted for use. They will then have the proper curvature. Mr. Brodie tries first to pass the gum catheter, without the stilet; if he fails, he then tries the instrument with the stilet. Gentlemen, be sure to remember that, in cases of the present disease, large catheters are more easy of introduction than small ones; and that the stilet of elastic catheters ought to be considerably curved. In passing them, Mr. Brodie keeps the handle, at first, close to the left groin, introduces them as far as possible in this position, then brings the handle forwards nearly to a right angle with the pubes, and the handle is then to be depressed slowly and gently by placing one finger on it. When this is done, the point generally glides into the bladder, though sometimes this does not happen till you withdraw the stilet. In particular examples, you will find it necessary to bend the point forward by means of a finger within the rectum, or on the perinæum.

If no catheter can be introduced, puncture the bladder above the pubes; this I think is a better practice than forming a passage through the diseased mass of the prostate. At the same time, I may observe to you, gentlemen, that you will almost always succeed in getting in a catheter, and that puncturing is rarely called for.

I next proceed to the consideration of *Strictures of the Urethra*. A stricture of the urethra may be defined to be such a contraction or alteration of a part of the passage, that here it becomes considerably narrower than what it is by nature, or even entirely obstructed. With the subject of strictures, however, it is usual to consider several states of the urethra, as first, the *irritable urethra*, as it is termed; secondly, *spasmodic strictures;* and thirdly, *permanent strictures*. Respecting the irritable urethra, I believe the term is rather employed for its convenience than its precision; and generally what is said upon this reputed irritability of the urethra is vague and of little value. Frequent desire to make water, and more or less uneasiness in passing it are commonly specified as symptoms of an irritable urethra: occasionally attended also with a discharge. Now, these effects may result from so many various causes, that really it is difficult to admit the propriety of taking them as proofs of an irritable urethra. Any inflammation in the urethra will cause the symptoms: so will an incipient stricture in certain constitutions.

Now, nothing shows more clearly the unsettled notions, attached to the subject of irritable urethra, than the widely opposite modes of treatment adopted for its relief by different practitioners. Thus, some surgeons treat it by prescribing, three times a-day, one-eighth of a grain of the oxymuriate of mercury, and ℥j of nitrous spirit of æther; some, referring it to disorder of the digestive organs, prescribe the blue pill and sarsaparilla; some, viewing it as connected with the inflammatory state of the canal, employ leeches to the perinæum, and take blood from the loins by cupping; some, judging that it is the same thing as the alleged spasmodic stricture, give hyoscyamus, or compound powder of ipecacuanha; while others, regarding it merely as too sensitive a state of the passage, endeavour to blunt its extraordinary tenderness by the occasional introduction of bougies.

In the next place, gentlemen, I may observe to you, with respect to the division of strictures into spasmodic and permanent, it is not satisfactory to all surgeons, some of whom have a difficulty in believing that the lining of the urethra is endued with muscularity. The observations of John Hunter maintain the latter doctrine, in favour of which several facts are usually adduced. Thus, a man, if otherwise healthy, voids his urine one day in a full stream; on the following day exposes himself to damp and cold, or takes punch, or acidulous wine; next morning he cannot void his urine; is relieved by going to bed, taking a dose of compound powder of ipecacuanha, and, after having had the bowels emptied by medicine, he passes his water as well as usual. Then, the effect of large bougies, or nitrate of silver, in enabling another patient to make water in a considerable stream, is also adduced as an argument on the same side of the question. The difficulty of passing water in such cases comes on suddenly, and ceases suddenly; the cause is temporary—not a permanent disease. The canal of the urethra certainly varies in its diameter at different periods, and cold appears to have great effect in rendering it narrower. In practice, it has always appeared to me that bougies and other instruments will enter the urethra much more easily in the same patient at some periods than others; that opium, hyoscyamus, and other narcotics, often

facilitate the passage of such instruments. But then, it is maintained, that the resistance, when it occurs, is not anterior to that portion of the canal which may be conceived to be affected by the action of muscles in the perinæum. Abroad, the doctrine of the muscularity of the membrane of the urethra, and of spasmodic strictures, has gained, I believe, no advocates. There the formation of strictures is invariably ascribed to the effect of inflammation in thickening parts of the canal; and the same view is adopted by Sir C. Bell and many other practitioners in this country, who explain various circumstances, which have been referred to spasm of the urethra itself, by the action of muscles in its vicinity, and on the outside of it. A permanent stricture is attended with a conversion of the contracted part of the lining of the urethra into a substance of the consistence of ligament, but without its fibrous texture. The contracted part has, it must be confessed, no appearance of the muscular tissue.

One of the earliest symptoms of a stricture is the *retention of a few drops of urine in the urethra after the patient has made water*, which drops soon escape, and slightly wet the linen, while another small quantity, collected between the neck of the bladder and the stricture, may be expelled by pressure below the urethra. The next thing noticed is, that the patient *cannot retain his water as long as usual*, but is obliged to empty the bladder once, twice, or oftener, in the course of the night. As the disease increases the stream of urine becomes *forked*, *spiral*, or *scattered*; and in a still more advanced stage, *the water is voided only by drops, or altogether stopped*, especially when the urethra is under the influence of cold, irritation, or the effects of intemperance. In addition to these symptoms, the patient has pain about the glans penis, and there is commonly a thin gleety discharge from the passage, a circumstance which often leads to the serious mistake of treating the case, as if it were merely a gonorrhœa or gleet.

In consequence of the natural sympathy between the urethra and testicles, one of the latter organs is liable to be attacked with inflammation, more especially, however, during the use of bougies. Whether a stricture be at first merely spasmodic, and capable of relaxation, as the Hunterian doctrines teach, is a disputed point; but it is universally admitted, that, after a time, the part of the urethra which is the seat of stricture is thickened as well as contracted, that the diminution of this portion of the canal is not a temporary or periodical affection; in other words, that the stricture is permanent.

In old and aggravated cases of stricture, the bladder usually becomes considerably thickened, and does not admit of its usual degree of expansion. Frequently it inflames, and pours out a viscid kind of secretion like pus. And when the obstruction in the urethra attains a certain stage, ulceration takes place between the bladder and the first and principal stricture; abscesses form on the outside of the canal, and, bursting, produce channels for the escape of the urine, called, on account of their situation and their usual indisposition to heal, so long as the obstruction in the urethra is not removed, *fistulæ in perinæo*. Here, gentlemen, is a bladder, diseased in consequence of stricture. It is thickened, and in one place sacculated. Ulceration has occurred, followed by fistulæ in perinæo. At the sides of the caput gallinaginis, you may notice openings capable of receiving the largest bougies, and communicating with such fistulæ. This preparation is likewise an example of stricture followed by abscess and fistulæ. The bottle contains the penis, bladder, and rectum, with bristles put into the fistulæ. The urethra is laid open to show the stricture.

To-morrow evening, gentlemen, I shall bring the subject of diseases of the urinary organs, and indeed this course of lectures, to a conclusion; for, after having trespassed upon your patience so long, and delivered, with the morning demonstrations of the operations, not less, I believe, than about one hundred and eight lectures, it seems to me that we all stand in need of a little rest and recreation.

CLINICAL LECTURE

ON

ECTROPIUM, TRICHIASIS, AND ENTROPIUM.

Delivered at the Hôpital de la Pitié, Paris,

BY M. LISFRANC,

PRINCIPAL SURGEON TO THAT HOSPITAL.

GENTLEMEN,—*Ectropium.*—The causes which induce this affection being numerous, the treatment must vary according to each individual case. Thus, in certain inflammations of the eye, the tumefaction of the membrane which lines the internal surface of the palpebra may produce an eversion, requiring for its cure the employment of remedies adapted to the suppression of the primary disease. If this tissue be thickened, and continue to form a sort of wedge between the palpebra and the globe of the eye, its excision may be easily performed by means of a pair of curved scissors.

Tumours of various descriptions, but more particularly cysts, occur frequently within the tissue of the eyelids. They are more developed, consequently protuberant externally, and hence tend, in proportion to their growth, to evert the free border of the palpebra. In seizing their internal surface with a small pair of forceps, in order to extirpate them, either with the curved scissors or cataract knife, the inconvenience caused by their presence may be easily remedied, and with the greater confidence of success, as the operation may be assisted by the means I am about to point out to you in the sequel of this discourse, when I come to treat of the best mode of elevating

the eyelid to obtain an internal cicatrix of the least possible breadth.

More frequently, however, this affection is caused by cicatrices situated on the cutaneous aspect of the palpebra, resulting from the injudicious treatment of burns, wounds, or ulcers. Ancient authors, such as Heister, Ambroise Paré, Ledreau, have limited their practice to the destruction of the everting cicatrix, whilst, on the contrary, the modern schools have altogether abandoned this method, considering it as treacherous and uncertain. But can it be reasonably admitted that the illustrious surgeons, above quoted, could have employed in their practice, and eulogised in their works, an operation which invariably proved ineffectual. I cannot believe it; for why was it not possible for them to have obtained a success in this case, similar to that which so frequently follows the treatment of permanent contractions of the extremities, by the simple division of the opposing bands? I would rather establish these distinctions. If you are called on to treat extensive cicatrices occupying the entire palpebra, or even its major part, do not by any means have recourse to the ancient method to remedy their eversion, since you will infallibly fail; but if, on the contrary, the disease be produced by a narrow band, attached at one extremity to the tarsus, and by the other to the circumference of the orbit, an incision made at its two points of insertion, in order to effect its extirpation, will readily effect a cure. A like success may be obtained in cases where the disease is occasioned by a falciform band, occupying about a third of the free border of the palpebra, and proceeding from this point to become attached to the internal angle of the eye. The band, however, may be adherent to the subjacent tissues in their whole extent, in which case, if it be narrow, you may content yourselves with dividing it transversely from its free to its attached border; and by afterwards making three or four longitudinal incisions, or, if it be very thin, you may remove it altogether by dissecting up the edges of the transverse incision, and throwing back the tissues from below upwards, and from without inwards, and thus obtain a cicatrix, which, no longer exercising a traction on the eyelid, is consequently unable to evert the tarsus.

In all other cases the preference is generally given to the method of Bordenave, which consists in causing a loss of substance in the posterior surface of the palpebra, proportioned to the extent of its eversion. It is my opinion that it is more preferable to remove a large than a small portion of its lining membrane; thus I should recommend you to take away at least the half in ordinary cases, and the totality in those of a more complicated nature. For this purpose the operator should seize with a small pair of dissecting forceps, and not with the tenaculum, as some surgeons have advised, since small wounds result from its use, which, by furnishing an immediate flow of blood, obscure the parts necessary to be removed. I therefore repeat again, the surgeon should rather seize with a pair of forceps that portion of the mucous membrane which is nearest to him, whilst an assistant does the same on the opposite side; the parts thus raised are then to be removed with the curved scissors.

The excision accomplished, some surgeons abandon the cicatrisation of the wound to nature; but experience has proved how little we can rely on the success of this mode of proceeding: hence medical men are now generally agreed on the necessity of maintaining the palpebræ elevated, in order to render the cicatrix as linear as possible. With this object in view, it has been recommended to collect the cilia into two or three little bundles, which are to be secured by means of as many pieces of sewing silk, and to fix the latter to the forehead by strips of adhesive plaster; eyelashes must, however, exist to render these means applicable. Besides, this sort of ligature is not always easily performed, and the traction which the cilia experience, may be excessively painful, or may be even carried to such an extent as to produce their eradication. Further, the thread may slip from off the cilia, or the latter be no longer retained against the forehead by the adhesive plaster. I am in the habit of employing for this purpose a method which fulfils the indication at least equally well, and which does not possess the inconveniences above pointed out. These simple means consist in the use of adhesive or court plaster, cut in the form of a horse-shoe, of the breadth of about two fingers, and snipped at its inferior convex border, in order to render its application more easy and exact; one of its extremities is fixed to the middle of the forehead, descends over the internal angle of the eye, follows, by its superior and concave border, the direction of the tarsus belonging to the inferior palpebra, on the external surface of which it is applied, whilst the other extremity, drawn sufficiently upwards to elevate the eyelid, goes to be attached to the temple of the side affected. In order to retain more effectually the palpebra in its normal position, in some severe cases of ectropium, I have additional recourse to small graduated compresses, placed on the internal angle of the eye, and retained by small strips of adhesive plaster directed from the face towards the forehead. The eye should be covered with a simple band of linen, or the single eye bandage may be employed. I must not forget to observe to you, that the mode of dressing this again, which I have just described, is of the greatest utility in those cases of ectropium where the cicatrix is alone attacked, in order to produce a cure.

But the method of Bordenave, however advantageous it may be, especially when combined with the mode of treatment that I have just described, can only retract the eyelid to a given extent. Now there exist cases

in which a total eversion occurs, caused by a very extensive cicatrix, and it is here that I employ successfully the method that I have denominated *mixed*. You may have already conjectured that it consists in imitating Bordenave, with this exception, that I remove the whole of the mucous membrane lining the internal surface of the eyelid, and after having divided transversely the cicatrix (real cause of the disease), I employ such means as are suited as much as possible to obtain a cicatrix, narrow posteriorly and broad anteriorly. In still more serious cases, after having put into practice the method of Bordenave, you may perform, at a distance of six or eight lines beneath the base of the orbit, a transverse semilunar infero-convex incision, whose breadth should equal that of the eyelid, taking care to divide only the integuments and cellular tissue. The superior border of the wound should next be reflected from below upwards, as far as the margin of the orbit, where it should be retained; then the vertical diameter of the palpebra is, as may be readily seen, greatly increased. The inferior edge of the incision must now be detached from the subjacent adherences, until it can be approximated to the superior. This manœuvre will be attended with success, the more so since it may be brought into contact with the latter, by means of proper compression, which is easily accomplished by carrying the surrounding soft parts from below upwards, and from without inwards. Lastly, when the cartilage of the tarsus is considerably deformed, being, as it were, rolled on itself, the case is generally considered as incurable; but since it has been found practicable to restore an entire eyelid, why ought it to be impossible to combat this disease, by sacrificing this body either in part or in totality?

M. Trobriant, midshipman, was affected with a complete eversion of the left inferior palpebra; he had been twice operated on by the method of Bordenave, without success; yet, notwithstanding these very unfavourable circumstances, I decided on risking a third attempt. I removed the whole of the mucous membrane lining the palpebra, and dressed the wound according to the mode I have just described. So perfect was the result of this operation, that it is now impossible to detect on which eye it has been performed.

Godinot, inspector of hackney-coaches, was inconvenienced, during several months, by the presence of a tumour, occupying the internal surface of the eyelid, which on account of its volume had produced a very extensive ectropium. I was requested to perform its extirpation. After having circumscribed the tumour by two semilunar incisions with the cataract knife, I dissected it carefully out, and applied small strips of adhesive plaster. In this case, also, the eyelid was restored to its normal position.

Trichiasis and Entropium.—Authors have only described one species of trichiasis, resulting from a deviation of the cilia whether it depends on the false direction of these hairs, or that the tarsus itself into which they are implanted be inverted towards the globe of the eye. A second variety has been more particularly noticed by myself which exists only when the eyelids are closed. In these cases the affection is owing to the fact that the superior tarsus, instead of corresponding to, overlaps the inferior; hence it results that the hairs of the latter are directed against the globe of the eye, on which they produce those serious inconveniences noticed by all pathologists. You have seen me, in a case which has been recently presented to your notice, besmear the free border of the palpebra with ink, in order to ascertain precisely the exact height attained by the inverted cilia, and demonstrate to conviction an overlapping of two lines and a half.

This disease may be attributed to three different causes; 1st. To an inversion of the eyelashes, whilst the palpebra maintains its ordinary position. 2nd. To the inversion of the latter, or else to the overlapping already pointed out. 3rd. To such a vitiated conformation of the cartilage that we can scarcely expect to act advantageously on the palpebra itself. In the two first cases you can attack the eyelashes, or, what is still better, the palpebra; in the latter it is necessary to destroy the cilia, by one of the means which I am about to examine in succession.

Different methods have been proposed for the destruction of the cilia. 1st. Their evulsion; but these hairs, similar in this respect to evergreen plants, are reproduced in greater numbers, in proportion as they are eradicated, and cause more inconvenience to the patient, since the stubbed ends, which always remain after this operation, exercise an increased irritation on the globe of the eye. M. Champesme has signalised many instances of this multiplied reproduction, and I also have had occasion to witness several. 2nd. Cauterisation of the bulbs; in order to effect this, the free border of the eyelid must be divided with a bistoury, and afterwards a piece of nitrate of silver, cut in the form of a pencil, should be drawn over the surface of the wound, which has been previously freed from moisture by the application of appropriate means.

Some surgeons place in the groove, which the tarsus presents, a small quantity of this caustic in solution; but this method is, in general, very uncertain. It either penetrates too deep and produces accidents of a more or less serious nature, or else its action is not sufficient, and thus necessarily fails altogether. 3rd. Jacger proposed the removal of the free border of the eyelid with a pair of curved scissors, but the deformity which follows this method would alone cause it to be rejected, and I only mention it as an historical fact. 4th. The destruction of the bulbs by means of the actual cautery; this was formely practised with a small probe, resembling a common

knitting needle, but, on account of the tenuity of this instrument, its simple removal from the fire, in order to carry it to the eye, sufficed to cause it to lose the greater part of its caloric, and, although heated to whiteness, it no longer retained a sufficient temperature to enable it to reach and destroy the roots of the eyelashes. M. Champesme has recalled this species of cauterisation from the oblivion into which its imperfection had naturally caused it to be plunged. He proposes to perform it with a peculiar kind of instrument, bearing a great resemblance to that employed by tinmen in soldering, with this difference only, that it is less voluminous. This instrument, the description and delineation of which are found in the works of Ambroise Paré, represents, somewhat, the head of a lark, the beak of which, being four lines in length, terminates in a spheric ball of six lines in diameter, which is truncated at the part presented to the eye, and forms a sort of reservoir for retaining the caloric. The palpebræ being separated, the cautery must be applied successively to each individual bulb. I am in the habit of enveloping the rounded extremity, during the operation, with some substance which is a non-conductor of caloric. M. Champesme has found this method succeed in very serious cases; he has even employed it in patients whose degree of infirmity had obliged them to enter the Quinze-Vingts (hospital for the incurable). Nevertheless it is painful, frightful to the patient, and liable to induce an inflammation more or less difficult to combat efficaciously. However, in order to assure the success of this operation, it is necessary to ascertain the precise depth to which the eyelashes are implanted in the tarsus, for without this anatomico-chirurgical fact, you will be exposed to repeated failures. I have learnt from the researches which I have made on this subject, that they extend about two lines beneath the free border of the eyelid. Strips of adhesive plaster, applied in such a manner as to draw the tarsus outwards, and recommended for this purpose by M. Demours, constitute a remedy possessing but very little efficacy, even in ordinary cases.

Let us suppose we are enabled, and that we desire to act on the palpebra itself, 1st by imitating the method of Bordenave. Kokler has proposed the removal of a transverse portion of the integuments covering the anterior aspect of the eyelid. In fact it is readily conceived, that in causing the resulting wound to heal by the first intention, in such a way as to present an exact reunion, the tarsus will be drawn outwards, and consequently the eyelashes which are implanted into it will thus be directed forwards. But, in the first place, at what point ought this deperdition of substance to be performed? What extent should we give it? And, lastly, what are the precautions necessary to be adopted, in order to obtain the most advantageous effect? 1st. The incision should be so made, as that its middle be the broadest, and correspond to the centre of the palpebra, or of the deviated portion. 2nd. Authors do not explain the quantity of integument necessary to be sacrificed. I remove the two transverse thirds, and the perpendicular half; but if the disease be very extensive, I excise the totality; somewhat less, however, if it be slight. 3rd. In order to obtain the most beneficial retraction of the palpebra forwards from the resulting cicatrix, such a direction should be given to the wound as that its superior edge attain the tarsal cartilage. The following is the manner in which the operation should be performed:—The patient being in the recumbent or sitting posture, as in the operation for cataract, the surgeon seizes with the thumb and index finger of the left hand the integuments, raising them in such a manner as to cause them to form a fold. An assistant should take hold of one extremity with a pair of dissecting forceps, whilst the operator seizes the other, and removes the portion thus included with the curved scissors. In order to retain the edges of the wound in contact, you either employ a few sutures, or else remain content with depressing, by the aid of adhesive plaster and suitable bandages, the skin of the forehead, or raising that of the cheeks, according as the operation has been performed on the superior or inferior palpebra. This method is good, but its success is far from being certain, as may be seen on consulting the works of Scarpa and Demours.

2nd. Dr. Physic of Philadelphia, and M. Bouchet of Lyons, proposed at about the same time to practise on the palpebra a vertical incision of from two lines and a half to three, commencing at its free border, and penetrating the whole thickness of this organ. The edges of this incision were immediately separated, and thus the transverse diameter of the eyelid was increased, and a cure ensued. But, without speaking of the deformity which inevitably accompanies this method, I have had occasion to see at Lyons a great number of patients operated on by M. Bouchet, in whom the affection was reproduced after the lapse of a certain time. It sometimes, however, happens, that, on account of the tendency which the indurated tissue or cicatrix has to contract, the slit which the palpebra presents after the operation diminishes to such a point as to disappear altogether. (I shall have occasion hereafter to present to your notice a case illustrative of this fact.)

3rd. The method of Quadri, which consists in including in a V incision the inverted portion of the palpebra, presents the same inconveniences as the preceding, namely, deformity, transient cure, and, in addition, its applicability only to cases where the palpebra is only partially inverted, or where the deviation is confined to a few eyelashes, the roots of which are thus easily extracted.

4th. Method of Crampton:—The free border of the tarsus is here divided on either side of the inverted portion by two vertical incisions, which are united by a third or

horizontal, penetrating only the conjunctiva. Adhesive plaster is afterwards employed to retract outwards this portion thus rendered mobile. Saunders has given it as his opinion, that this mode of proceeding is only applicable to simple cases, and has proposed the excision of the deviated portion of the tarsus in those of a more complicated nature. These methods, as well as that of Vacca Berliggieri, are tedious, difficult, and much less advantageous than that I first described to you, and which is now employed by the generality of practitioners. However, I give an exclusive preference to this mode of operating, for which we are indebted to M. Janson of Lyons, since I do not hesitate to regard it as the most perfect, and, being but little known, I think it a duty incumbent on me to give its detailed description.

5th. The method of Janson :—The surgeon, with the thumb and index finger of the left hand, seizes the integuments covering the anterior aspect of the palpebra in such a manner as to produce a vertical fold, the superior extremity of which corresponds to the free border of this organ, and, at the same time, to the point most interested in the affection, proportioning its length to the space which separates the free from the adherent margin of the eyelid. The operator and his assistant now seize the two opposite extremities of this fold with the dissecting forceps, and exercise on it gentle tractions, in order to raise it as much as possible. The former, with a pair of scissors of moderate size, and curved on their flat side, makes the resection, with the precaution of extending the wound as far as the free margin of the eyelid. The blood should be allowed to flow for some seconds, and as soon as all sanguineous oozing has ceased, either spontaneously or by the application of a sponge imbibed with cold water, which may be allowed to remain on the wound for half a minute, or even a minute, the edges of the division should be united by means of the twisted suture, so as to obtain, if possible, a linear cicatrix. It is my opinion that you ought to avoid withdrawing the needles the fourth or fifth day, as is generally done, but wait until they fall by laceration of the tissues. Three or four transverse cicatrices are thus produced, which aid the vertical in drawing the palpebra outwards. But, to obtain the greatest possible advantage from this method, it is important to hasten the cicatrisation, and suppress carefully the luxuriant granulations which may be developed on the surface of the wound, so as to produce a cicatrix, by the apposition of its edges throughout their whole extent. This mode of operating, as ingenious as it is easy in its execution, has constantly succeeded in the hands of its inventor. I have exclusively employed it these last six years both in my hospital and private practice, in cases presenting different degrees of gravity, and the result has always proved favourable, except in one patient only, who still remains in the Ward of St. Louis, and in whom the success is incomplete. In this instance the inversion was very considerable, and caused by cicatrices existing on the free border of the palpebra, which has partially maintained its false position in a very limited portion of its internal half. It is true, that the cicatrisation is not yet complete, and therefore the hope of obtaining a perfect cure may still be entertained, the more so since, on recollecting the brilliant ideas which have emanated from the School at Montpellier, it is possible that these cicatrices, even if complete, may gradually contract, and continue their everting action on the tarsus.

I shall conclude this lecture by a reference to a few cases* admitted in this hospital, where the results of my operations are familiar to you all.

Reviews.

The Dublin Journal of Medical and Chemical Science, including the latest Discoveries in Medicine, Surgery, Chemistry, and the Collateral Sciences. No. XV. Vol. V. July. Hodges and Smith.

The present number of our esteemed contemporary contains the usual quantity of original communications, some of which are of great practical interest. Two of these we have already noticed,—Mr. L'Estrange's Description of the Calculo-Fractor for pulverising Calculus in the Bladder, in No. 130; and Mr. White's Report of Cases of Rupture of the Peritoneal Coat of the Uterus, in No. 132. Both these communications are deeply interesting to the practical surgeon and obstetrician, and are very creditable to the authors of them.

The next article is "On the Cause of the Pulse being affected by the Position of the Body," by Mr. Blackley. After stating that Dr. M'Donnell of Belfast was the first who noticed the difference of the pulse in the perpendicular and horizontal postures, and mentioned this fact to Professor Thomson of Edinburgh, who acknowledged it in his work on Inflammation, Mr. B. then extracts freely from the admirable papers of Professor Graves in the Dublin Hospital Reports of 1830, which, he properly observes, "for closeness of observation, and accuracy of experiment, are no less interesting to the physiologist than to the medical practitioner." The learned and able Professor declined to advance a plausible con-

* The cases referred to by M. Lisfranc will be found in Vol. V., page 275, of this Journal. —Rep.

jecture as to the reason why change of position affected the frequency of the pulse; and Mr. Blackley undertakes to solve the difficulty, with what success our readers must determine. He commences with these words:—

"I believe it will be readily conceded, that the action of the heart in a strong and healthy individual, while in a state of rest, is uniform and equal, that it is possessed of a power sufficient to expel a certain quantity of blood at each contraction of the left ventricle, which power is necessary to overcome the obstacles presented to the egress of the blood.

"Let us suppose, for instance, that the heart of a healthy man in the erect posture beats sixty times in a minute, and at each beat expels one ounce of blood, sixty ounces per minute will be of course expelled; but if the *power* of the heart be increased or diminished, we must expect a corresponding alteration in the number of beats. Thus, if the power be *increased* one-tenth, it will require but fifty-four beats to expel sixty ounces in a minute; but if it be diminished one-tenth, it will require sixty-six beats.

"To this variation of power in the heart are the phenomena of which we speak attributable, or rather I should say, *the variation of resistance to the heart,* which comes to the same thing. A question may here be asked, namely, 'can you prove that the heart discharges a greater quantity of blood at one time than another, or that the left ventricle does not at each contraction expel the entire of its contents?'

"I am fully aware that the general opinion is opposed to mine; indeed, actual experiment would seem to be against me, for it has been affirmed, that, on inserting the finger into the left ventricle of a recent heart, it contracts through its *whole extent;* nevertheless, I think I can prove the reverse, from the anatomy and mechanical construction of the heart itself.

"1st. There are no muscular fibres going from the substance of the left ventricle to be inserted into the opposite edges of the valves, or above them into the aorta; therefore the space immediately inferior to the valves cannot be compressed.

"2ndly. We never find the left ventricle perfectly closed after death, even though it should be at the time that rigidity of the muscular fibre prevails.

"3rdly. If the valves had no support, as by a certain quantity of blood under them, to act as a counter pressure, they would be liable to injury from the superincumbent mass of blood in the aorta.

"4thly. A vacuum being formed by the expansion of the ventricle, the valves would be drawn downwards with considerable force to fill it up, and thus an additional weight be unnecessarily imposed on them.

"Lastly. In a very rapid pulse, say 160, we can scarcely conceive the sides of the left ventricles to be closely approximated through their whole extent at each pulsation, and separated again, the usual quantity of blood as in health being expelled at each contraction. But we can readily admit that such a number of palpitations may be effected, the ventricle contracting but slightly at each beat; or a very small quantity of blood may be contained in the ventricle at each contraction, and thus supersede the necessity of the ventricle being much dilated; and we may observe, that in those cases where the pulse is so frequent as I have mentioned, it is never full and strong, but, on the contrary, weak and thready, evidently proving that a very small quantity of blood indeed is forwarded at each contraction of the ventricle."

The writer goes on to explain the relative force of resistance to the heart's action in the erect and horizontal positions; and his views are worthy of much consideration. These are as follows:—

"In the former we have the column of blood in the arch of the aorta assisted by that in the carotids pressing on the semilunar valves, and opposing the egress of blood from the left ventricle. Next, we find that, the arteries being all full, a considerable *vis a tergo* is required to force on the blood which they contain, especially through the carotids, where it must be driven upwards. But by far the greatest obstacle to the action of the left ventricle, and that which is the chief cause of the non-permanency of the pulse, is presented by the veins; if the arteries require the *vis a tergo,* their veins require it in a much greater degree, not only from the nature of their structure, which is inelastic, but that their contents, contrary to the laws of gravitation, must for the most part be forced directly upwards to the heart.

"In the horizontal position those obstacles are lessened or removed; the blood in the carotids and arch of the aorta does not press with such force upon the valves, but chiefly the *veins*, namely, all those below the heart, being placed in the most favourable position for *spontaneously* returning their contents, remove an immense obstacle to the egress of blood from the left ventricle. Hence it follows, that less resistance being opposed to the heart in the horizontal position, and the same power exerted, a greater quantity of blood is propelled at a time, and consequently the number of pulsations necessary to transmit the same quantity in a given time in the erect posture diminished.

"The frequency of pulsation, then, is in a direct ratio to the obstacles presented to the heart's action, whether those be mechanical or arising from debility of the heart itself."

These views not only explain the phenomena observed by Professor Graves, but throw much light on functional disorders, and organic diseases of the heart itself. Thus the Professor stated:—

"'As the muscular exertion necessary to keep the body in the erect posture might be considered as the cause of this greater frequency, it became necessary to contrive means of placing the body in any desired position, without the necessity of muscular exertion on the part of the subject of the experiment. This was effected, and it was found that when the posture was changed by means of such a contrivance, the difference between the frequency in the horizontal and erect postures was not less than when muscular exertion was used.' The theory of muscular exertion then being the cause, is set at rest for ever. 'I now anticipated that if the body was placed with the head down and feet up, a still further retardation of the pulse would be produced. It was, indeed, natural to suppose from the preceding experiment, that posture alone was the cause of the retardation observed in the body when placed horizontally, and, consequently, that this effect would be augmented on still more depressing the head, and that the maximum of retardation would occur in the inverted position. Here, however, as it not unfrequently happens, pre-conceived ideas were not found to accord with experiment, and no further retardation was thus effected; neither, on the other hand, was it accelerated beyond the number observed in the horizontal position.'"

Mr. Blackley's remarks on the preceding quotation are extremely interesting, and, in our opinion, very satisfactory. We cannot but quote them:—

"Thus, in respect of the foregoing observations, although in the inverted position there certainly is a greater facility for the return of the blood contained in the veins below the diaphragm to the heart, yet a new obstacle is offered to the action of the left ventricle in the relative position of the arteries. The blood in the aorta, iliac, and femoral arteries, &c., &c., must in this position be forced upwards, instead of gravitating to a certain extent downwards, as they do in the erect posture, and the blood in the veins of the head, neck, &c., will require a greater *vis a tergo* to be forced upwards to the heart. Hence I think we might readily deduce a rule to ascertain the relative force of opposition in the veins and arteries to the action of the heart in the various positions of the body. Thus, if in the erect posture, the most favourable for the transmission of blood in the arteries, and most unfavourable for the veins, the heart contracts eighty times a minute; and in the horizontal or inverted position, the most favourable for the return of the venous blood, and unfavourable for the arterial, it beat only sixty times, I conclude that the resistance opposed by the veins is one-fourth greater than that offered by the arteries. The easiest posture, then, in which the heart's action can be carried on, is that in which the arteries and veins are as little antagonised as possible, viz., the horizontal. 'It is very singular,' says Dr. Graves, 'that a posture so unnatural as the inverted should produce no effect on the frequency of the pulse as compared with the horizontal, while a change from the latter to the erect, both natural postures, is attended with so great an acceleration.'

"The reason is obvious; the opposition to the heart's action is the same in the two positions—the horizontal and inverted—the increased resistance in the arteries in the latter position being exactly balanced by the increased facility for the return of the venous blood; whilst, in the erect posture, the resistance of the veins is much increased over that

of the arteries, and the general opposition to the heart much greater than in either of the former positions. 'In the inverted position,' Dr. G. continues, 'although the *frequency* of the pulse is not altered, its strength is diminished, and often very considerably; it is not unusual, too, for it to become irregular, a fact that may be explained by the greater weight of the blood pressing back on the aortic valves, and then necessarily opposing an unusual impediment to its egress from the left ventricle.'

"I would suggest that the diminution of strength of pulse, observed in the inverted position, may in some manner be attributed to the pressure on the brain, or to the very unusual position of the heart, which is now turned upside down, and its strength and mobility thus lessened and confined. The same causes may exercise their influence in causing *irregularity*, but this latter is, I think, more directly referable to the superabundant quantity of blood, which, in this posture, is thrown into the right side of the heart, and which thus prevents the *equilibrium* being maintained between the two ventricles, and is not to be attributed to pressure on the valves, as there is at such a time much less pressure, than in the erect position when no such irregularity exists."

Dr. Graves remarked that the pulse was evidently stronger in the horizontal than in the erect posture, and that its maximum of strength and minimum of frequency are attained together. The following explanation of these phenomena is given by the writer, from whom we quote:—

"I would here remark, that the increased strength and (we may add) fulness of pulse observed in the horizontal position compared with the erect, depends on the resistance to the heart being diminished in the former, and a greater quantity of blood consequently expelled at each contraction, the *quantity* of blood being thus increased the *number* of pulsations required to transmit a given quantity is diminished, as I have already explained, whereas, if the quantity of blood were diminished the number of pulsations would be increased. Mr. Adams, in his paper on Diseases of the Heart (Dublin Hospital Reports, Vol. IV.), gives a case in which he expresses himself in harmony with this opinion."

Mr. Blackley asserts that Professor Graves's observations prove the correctness of his hypothesis.

"'In consequence,' says Dr. G., 'of the shortening of the valve, it imperfectly covered the auriculo-ventricular opening, and too readily allowed of a reflux of blood into the left auricle during the contraction of the ventricle. Hence the effort of the heart, instead of being, as it is in the natural state, expended in propelling the blood onwards through the aorta, was partly lost, because of the imperfect state of the valve admitting a regurgitation of some of the blood which was destined to pass into the aorta. *The heart was obliged therefore to reiterate its beats, to compensate by its quickness for that small quantity of blood it was incapable of furnishing at one contraction through the aorta.*'

"'In all other diseases in which I have investigated this subject,' he continues, 'I have found a difference between the frequency of the pulse in the erect, sitting, and horizontal posture; but in six cases of hypertrophy with dilatation of the heart no such difference was perceptible, although all these patients at the time of my making the experiment were in a debilitated state, which is that in which the changes induced by position are the most remarkable.

"'In those cases the hypertrophy and dilatation were very great, and in five of them certainly (examined after death), and in the sixth probably, the left ventricle was involved in the disease; and I am inclined to think that this permanency of the pulse, in all positions of the body, will be only found to exist in such cases, and not in those where the hypertrophy and dilatation are less considerable, and consequently the diagnosis more obscure. This circumstance may, it is true, detract from the value of the observation, so far as regards diagnosis, but certainly does not diminish its physiological interest.

"'I may observe, too, that should future observations prove that hypertrophy of the heart is not always attended by this permanency of the pulse (and I believe it is not), yet its occurrence in so many cases of that affection is nevertheless an interesting fact.'"

The following comments upon these extracts are entitled to careful examination, as they are calculated to influence our diagnosis of cardiac affections.

"Nothing can be more satisfactory than those remarks; they prove that the left ventricle being possessed of a certain additional power, namely, sufficient to overcome the resistance offered to the heart, in all positions of the body, that permanency of the pulse is the consequence, and therefore I think it follows, that the non-permanency of pulse, or the variation of it, depends on the inability of the heart to overcome the resistance opposed to it, with equal facility in all positions.

"The state of the valves, however, as Dr. Graves very accurately remarks, must have considerable influence in modifying the action of the heart; for on their integrity, as we may readily perceive, depends in a great measure the relative resistance opposed to the left ventricle; yet we may conceive the same effect, 'permanency of pulse,' to be produced in two very different states of disease, namely, hypertrophy *with* and *without valvular disease.* Thus hypertrophy, to a certain extent, assisted by valves in a healthy condition, may cause permanency of pulse, while hypertrophy to a much greater degree, even though the valves be obliterated, may give rise to the same effect, the increased muscularity, and consequently *power*, in the latter case, being equal to the assistance afforded by healthy valves in the former.

"A question arises;—If increased muscularity or hypertrophy be acquired by the heart in consequence of the obliteration of the valves, what would be the result, if the valves became so strengthened as to remove in a great measure the pressure of blood from the left ventricle? I reply—diminished muscularity or atrophy. This I am fortunately enabled to prove by reference to Mr. Adams' Treatise on Diseases of the Heart (Op. cit.), in which the following case occurs—one, the most interesting and extraordinary, perhaps, that has ever attended pathological research, namely, the change of the muscular structure of the heart into fat.

"'The right auricle was much dilated, the right ventricle externally presented no appearance whatever of muscular fibres, it seemed composed of fat throughout almost its whole substance. The left ventricle was very thin, and its whole surface was covered with a layer of fat, beneath this the muscular structure was not a line in thickness.'

"This I think will be readily admitted to have been a completely atonic condition of the organ, but let us inquire the cause. 'Indeed the left ventricle was so weak, and its parietes so reduced, that, at first sight, it created our surprise that it was at all capable of carrying on the circulation, which was not a little increased when, on a close examination, it was discovered that the valves of the aorta had become, from cartilaginous and earthy depositions, so rigid as to retain water, whether poured upon them from the artery or the ventricle, the contact of their edges was preserved in such a manner, that it required that a fluid should be injected from the heart with some little force to render this arterial opening pervious.' This case speaks volumes; it is an additional proof of the immense influence which the valves exercise over the action of the heart, and it serves to place in strongest contrast two opposite states of disease induced by the condition of the valves, namely, atrophy, as in this case, caused by the unusual strength of the valves, and the support afforded by them to the column of blood in the arteries, superseding the necessity of the usual muscularity of the ventricle, compared with hypertrophy induced by obliteration of the valves, and the consequent necessity of increased muscularity, to overcome the additional obstacles consequently presented to the egress of the blood. This, at first sight, may appear contradictory, as the state of the valves presented an additional obstacle in itself, but let us recollect, that the heart, like other organs, may accommodate itself to changes, when effected gradually, that would cause instant death if suddenly induced.

"While speaking of the valves, and the influence they exert, it may not be uninteresting to mention that Haller was fully aware of the effect produced by them, when in a diseased state, on the heart, though not perhaps quite clear as to the cause. In his work, De Partium Corporis Humani Fabricâ et Functionibus, he gives several instances, amongst others the following:—'Valvulæ aortæ contractæ ut sanguis in cor rediret, hinc ventriculus sinister dextro amplior.' Again, 'Cum eadem ostiola ossea forent, et sanguinem retrogradum in cor admitterent, cor sinistrum amplissimum.'

"Very many practical results and inquiries are deducible from the foregoing observations,

not the least useful of which would be the relative degree of hypertrophy induced by the various morbid conditions of the valves; and also the propriety of lessening the mass of the circulation, and removing the resistance to the heart by observing the horizontal posture, in hypertrophy as a primary and uncomplicated disease.

"It has been observed, that the greatest variety in the frequency of the pulse on change of posture, occurs in persons labouring under fever, or debilitated in consequence of that or any other cause, amounting in some cases to so great a difference as even fifty between the erect and horizontal positions, (Dr. Graves, op. cit.) and this we might expect on considering the structure of which the heart is composed, and the purposes it serves.

"It is a muscular organ, and participates with the other muscles of the body in the general debility of the frame in sickness; not being able to overcome the obstacles presented to the egress of the blood in the erect posture, in as few pulsations as in the horizontal, it is forced to contract the more frequently in order to transmit the same quantity of blood in a given time as in the latter position, at least it makes an effort to do so, and this greater variation is therefore a good diagnostic sign of the general debility of the patient, and *vice versâ*; of course when the patient lies down the pulse falls to its former standard, the obstacle which caused its increased action being removed; in other words, the veins now empty themselves *spontaneously*, instead of requiring the *vis a tergo* from the heart to propel the blood through them, consequently the resistance to the left ventricle is lessened. It sometimes, however, happens, that the pulse does *not* fall to its former standard on the person lying down, and the cause is interesting.

"On assuming the erect posture from the horizontal (when much debilitated), the heart is affected in two ways; first, by the irritation of an unusual stimulus; secondly, the actual obstacle to the return of the venous blood; where the weakness is not to a great extent, it becomes accustomed to the irritation, and consequently after some minutes falls a few beats, but still remains more frequent than in the horizontal posture, being affected by the latter obstacle, the non-return of the venous blood. It may, however, occur, that the irritation once induced may continue, and the increased action of the heart be thus kept up, even after the patient lies down, and this is a good diagnostic sign, as it indicates excessive weakness or irritability. It has been observed by Dr. Graves, that in some persons the increase of frequency in the pulse is greater between the horizontal and sitting postures, than between the latter and the erect; while in others the contrary takes place, so that generally the frequency in the sitting posture may be taken as a mean; this is perfectly correct, and agrees fully with the theory I have advanced; for the femoral vein in the sitting posture is horizontal, and the weight of the column of blood from the feet to the head is broken, consequently the resistance to the left ventricle much diminished. In like manner we may find, that if we now raise the legs to a level with the thighs, we shall have a further retardation of the pulse by from two to four beats; this, however, will depend much on the age and strength of the individual, and on the healthy condition of the lower extremities in general, and the veins of those parts in particular; thus, where the limbs are anasarcous, or the veins varicose, we may expect a greater modification of the pulse in this position than where the legs are pending, while, in a strong and healthy young person, little or no difference is at times to be observed whether the legs are perpendicular or horizontal."

We have quoted from this paper very freely, on account of its extreme importance; for, if the views maintained in it be correct, they will materially assist us in forming accurate conclusions in a vast variety of diseases, not only of the heart but of other organs. We think Mr. Blackley entitled to great praise for the manner in which he has treated this obscure and difficult subject; and should his conclusions be admitted and proved by others, he will have done much for the promotion of pathology.

The succeeding paper is also one richly deserving of attentive perusal. It is entitled "Some Consideration on Scrofula, and the various Means of Cure employed at the Children's Hospital, Paris, more particularly on the Effects of Iodine in the Treatment of this Disease," by James Eager, M.D. The writer has had the advantage of having been house-surgeon

to some of the Parisian hospitals; and, as these admit scrofulous patients, has had ample opportunities of observing the different forms of this disease. After some apposite preparatory remarks, he proceeds to describe the pathology of scrofula, and he has executed this difficult task so well, that we are bound to place his views before our readers. He commences by stating that scrofula

"Consists of tumours of a round form, varying in size from a millet seed to a turkey egg, sometimes encysted, more frequently otherwise, single or numerous, isolated or in a mass. These tumours are composed of the lymphatic glands, enlarged and indurated, or more frequently having undergone the tubercular disorganisation. In the latter case, the substance which forms them is opaque, of a pale colour, at first hard, like concrete albumen, (*periode de crudité*) afterwards it becomes friable, soft, and finally liquid, like pus, (*periode de ramollissement*). In it we find no trace of organisation. It may exist in the tissues in an infiltrated state, such as in the bones and around the articulations; and although the character of the affection does not change, the name of tubercle is no longer assigned to it in this form.

"The lungs, the mesenteric and cervical glands, the prostate, spleen, ovaries, brain, cerebellum, spinal marrow, liver, and bones, are the organs most frequently attacked, and in the order just laid down.

"It is obvious that this description applies especially to what is termed tubercle; in scrofula, however, there are other appearances which are better given with the symptoms of the disease, particularly as the anatomical examination throws no light on their nature; nevertheless, as scrofula, when confirmed, rarely exists without tubercle, it becomes necessary to notice the latter; at the same time avoiding to infer the identity of these affections from their co-existence, a conclusion which is inadmissible in the actual state of our knowledge of the subject."

Dr. Eager next describes the causes, or rather the predisposing causes of scrofula, and denies that a lymphatic constitution is one of these. Here we totally differ from him; and, as he adduces no arguments or proofs in support of his conclusion, we think few will agree with him. He also contradicts himself in a subsequent page (348), when he says that the disease is most common in those "in whom a lymphatic temperament prevails." He seems to us not to attach sufficient importance to temperaments; and we cannot but remark, that if he can dispose of that to which he alludes in this summary manner, he can as easily object to all others. Were he to go this length (and he certainly implies as much), the result would be, that the same line of practice would be applicable to all, and that the sanguineous, nervous, melancholic, and lymphatic, might be treated alike. Experience and observation have long since convinced us of the fallacy of this notion; and we apprehend that the Doctor himself would hesitate to employ the same active treatment in a hale countryman of a sanguineous temperament, and in a blanched nervous lady in high life. We agree with him, however, in the statement, that the predisposing signs of scrofula do not always exist, or rather, we should say, are not always apparent. His remarks on the efficient causes are just, and worthy of attention, and they embrace the development of tubercles in different parts of the body. We must quote them at length.

"Many causes are said to originate scrofula. The continued action of a cold moist air is with many authors the principal one. I have abundant reasons to think that the absence of the direct solar rays, and a long sojourn in a confined atmosphere, contribute more than any other towards the development of scrofula.

"All physiologists are aware that these circumstances I mention are calculated to give a predominance to the white liquids of the body, to excite the action of the lymphatic system, and to impart to the organisation of animals and vegetables that remarkable blanched appearance called '*etiolement.*'

"I have questioned very attentively the parents of 74 scrofulous children, and learned that of this number 56 lived in low houses with very small windows on the ground floor, where the direct rays of the sun never penetrated, and in which, though very small, five or six persons slept. The remaining 18 belonged to individuals in better circumstances, and, although consequently better nourished, were in every other respect in the same condition as the 56. The greater part belonged to the lower classes. They were subjected to great privations, and lived in

rooms exposed to the north. These circumstances augmented the predisposition, and frequently brought on the disease in cases where this predisposition did not exist.

" Inflammation is considered a frequent cause of scrofula in all temperaments. All substances susceptible of becoming acid on the stomach are said to induce this disease. An illustrious professor of this faculty thinks inflammation acts the principal and exclusive part in its production. It is true inflammation has been frequently found to coexist with tubercles. Tubercles seem sometimes produced in the brain by encephalitis; bronchitis, pneumonia, and pleuritis have often existed with those of the lungs. Those of the mesentery are almost always an effect of gastro-intestinal inflammation, those of the liver, that of a chronic inflammation of the pyloric extremity of the stomach and duodenum, and in some cases have even succeeded hepatitis.

" These facts, although remarkable, are far from conclusive, because inflammation does not give rise to tubercles without the co-operation of other causes. Do we not often find inflammation terminate without tubercles or glandular indurations in warm seasons, whereas the contrary is the case in opposite circumstances. We also find persons kept for a long time under the influence of cold or moisture, and who nevertheless do not become tubercular or scrofulous, whilst others in a similar situation are speedily affected.

" It is worthy of remark, that the persons thus affected are most commonly women and children, in whom the lymphatic temperament predominates. I have five observations which offer exceptions to this fact, they are of persons of a decidedly sanguine temperament, in whom, by auscultation and percussion, we could not detect the slightest sign of tubercles, but who, nevertheless, in the course of traumatic fever, were seized with pneumonia; and this affection was speedily followed by the most characteristic symptoms of pulmonary phthisis. M. Andral mentions in his work cases of mesenteric tubercles in adults in which, after death, no trace of phlogosis was found. Here I anticipate an objection. In the first case tubercles (miliary) might have existed in the lungs in a latent state; and all stethoscopists know that in these circumstances it is extremely difficult, without the help of premonitory symptoms, to detect them. With regard to the second case, were we to judge from analogy, we ought not to infer the absolute non-existence of inflammation from the absence of proofs *à posteriori*, as we are well aware that it is only when inflammation exists to a certain degree that it leaves traces after death. There are erysipelatous affections of the intestines as of the skin, and in the latter, during syncope, the result of bleeding, and after death, we often find no traces of irritations that visibly existed previously to these changes; moreover, the slightest irritation in one system suffices to bring on a sympathetic one in another, which is disposed to it. This we see every day. The use of farinaceous food is said to determine tabes mesenterica and scrofula, and this same cause may (according to some authors) bring on phthisis. It is very remarkable that herbivorous animals contract phthisis very frequently, whereas carnivorous ones are very seldom affected. Butchers are also seldom attacked by it. Are we to ascribe this exemption to their constant sojourn in an atmosphere charged with animal emanations? This is probable, and the more so, as we are aware that good animal food is amongst the most effectual accessary means of cure in scrofula. It may be of use to persons threatened with tubercular phthisis, to give a preference to animal food. This is a mere supposition, although I know of no facts to support it, yet it appears to merit a trial. I have been induced to advert to phthisis in this article from the frequent occurrence of this disease in scrofulous patients. In a word, if you examine a great many individuals affected with scrofula, you will certainly find that, when the disease is intense and of long duration, the lungs are almost constantly affected with tubercles. This is so true, that you may conclude, *à priori*, when scrofula exists in a subject *in its apogée*, that the lungs or mesenteric glands are the seat of tubercular masses. The latter fact is important as regards tabes mesenterica, particularly as there are two states of this affection, one in which the glands are simply indurated and a little enlarged, and a second in which they have undergone the tubercular disorganisation. The first may be cured by judicious treatment, but the second is incurable from the very fact that tubercles are not resorbed; and, as from

their position in the mesentery, they cannot be eliminated by the suppurative process, they keep up a constant and destructive irritation which always terminates by death. The reader, I presume, after having considered the greater number of the causes here laid down, has come to a conclusion, that from their contradictory results they can, at most, be but accessary in their mode of action. This view appears to me very accurate. In the first place it is evident, that, in scrofula, all the economy seems to have undergone a fundamental and profound modification from the influence of causes, the action of which has continued for a long time. Now, of all causes none is more general in its action, none that affects both rich and poor more frequently, than *foul, confined air.* It is an established fact, that pure air is indispensable to the healthy state of the functions, and that when it does not contain its due proportion of oxygen, it modifies the *hæmatosis* in a singular manner. In the first instance, through the medium of the lungs, it impregnates the blood with a principle that pervades the body, giving health and life to the organs, by supplying them with arterial blood; whereas, in the second, the blood not having received a necessary quantity of oxygen, passes into the system with its venous qualities, and, by producing an unhealthy action in the processes of assimilation and decomposition, blunts the sensibility of the organs, and consequently produces a morbid alteration of their functions. Hence that dulness, that inactivity which we observe in individuals, who are, as it were, saturated with scrofula. Now, if we take this view of the subject, and suppose all the other causes, which are of a nature to determine irritations, to be brought into operation on an individual so circumstanced, it is evident that the effects of the irritations which follow cannot be the same as when the hæmatosis goes on in the normal way; and hence it is, that when the first condition, *foul air*, does not exist, the other causes will not determine the disease. The poorer classes in Palermo live on the most miserable food, and in filth and poverty; now, if these causes were what is generally ascribed to them, these people ought to suffer from scrofula. The contrary, however, is the case; and it is remarkable that they live in open air. What are we to infer but that, notwithstanding their poverty, &c., &c., their breathing pure air exempts them from scrofula. In a word, I am satisfied that neither cold moist air, nor too nutritious food, nor poor food, nor inflammation, suffice to induce this disease without the action of foul air and the effect of the absence of the direct rays of the sun. Were this fact well established, of what importance would it not be to the manufacturing districts in our country, where this malady is so prevalent. From it would follow the necessity of keeping children and other labouring persons in well ventilated and well situated factories. I trust these remarks will direct the attention of observers, who have an opportunity in these towns, to the consideration of this subject; and I have no doubt but that their researches will lead to such preventive means as shall, if not entirely suppress, at least considerably diminish, the frequency of this dreadful disease.

"Scrofula affects more particularly the parts of the body in which the vital functions are most active. In conformity with a well known law of the economy, the liquids flow with more force, and in greater abundance, towards the head in children than in adults. Hence it follows that tubercles in the brain are more frequent in the former than the latter, because the brain in children is *functionally* the centre of a strong and continued action. However, this augmentation of vitality does not explain these morbid phenomena, for in old persons, although this organ is the seat of extreme irritability, still tubercles are a very rare occurrence. Scrofula in general comes on in children at that period when a continued irritation is kept up about the jaws by the process of dentition. In adults we find the lungs affected with tubercles by reason of the activity of these organs at this period of life. In older persons, by reason of the predominance of the abdominal viscera, tubercles of the liver prevail almost exclusively, and those of the uterus in women.

"Some persons consider scrofula hereditary. This opinion cannot be admitted in the rigorous acceptation of the term, we inherit from our parents a disposition to contract disease with an organisation like theirs, but not a germ of these diseases. The children of parents who present no trace of the disease may become affected with scrofula. Persons

too old or too young, especially if their constitutions be impaired by excesses, give birth to children badly formed, and disposed to many affections, more particularly to scrofula. As to this disease being contagious, there are too many opinions to the contrary on record, to render it necessary to insist longer on this point."

Here we must pause for the present; and we cannot help observing, that Dr. Eager has very ably elucidated the nature and treatment of scrofula, as we shall prove hereafter. The disease, though one of the most common, is not sufficiently attended to in this country, and thousands of sufferers are allowed to pine and be destroyed by it, for, strange to say, almost all our hospitals, infirmaries, and dispensaries, are closed against them. We therefore deem it our duty to notice the paper before us in detail, as we feel convinced it will contribute in no small degree to the alleviation of human suffering. Though we differ from the writer in some of his views, we part with him for the present with every sentiment of respect.

CASE OF COLICA PICTONUM RELIEVED BY OPIUM AND ELATERIUM.

BY JOHN LANGLEY, ESQ., SURGEON.

J. S.——, of No. 15, Cumberland-street, having been previously engaged for five consecutive weeks in painting, more particularly in that most pernicious description, called flatting, in which process white lead and spirit of turpentine form almost the only constituents of the paint used, producing by their compound an article highly evaporative, and consequently favouring a mineral impregnation of the surrounding atmosphere, in which this poor fellow was existing from twelve to fourteen hours daily during the above period, was attacked, on the 10th of May last, with symptoms indicating the incipient stage of colica pictonum, the prominent features of which, as sickness, general spasmodic affections, especially of the abdominal muscles, producing that peculiar concavity of the umbilical region, excessive intestinal tormina, obstinate constipation, partial suppression of urine, clammy skin, facies Hippocratica, &c., were in full force, and to alleviate and obviate which, opiates, purgatives, enemata, fomentations, and counter-irritants were, as by usual routine, most assiduously employed without remission or abatement of any symptom; the croton oil, in doses of two, three, and four minims, was given at different periods, without any beneficial effect. The fiftieth hour from my first visit had now arrived, and no alleviation of the sufferings of my patient, or valuable point gained. The increasing exhaustion and consequent prostration of strength, with continued intestinal agony, in despite of copious topical bleeding, gave me a very unfavourable prognosis of the issue. At this juncture, I prescribed one grain each of crude opium and extract of elaterium, in the form of pill, to be persisted in every hour, and covered the epigastric and umbilical regions with a strong sinapism. The first pill, from gastric irritation, was rejected soon after its inhibition. In the interval between the first and second dose, the cataplasm had produced considerable and painful cutaneous inflammation, probably accounting for the subsequent quiescence of the stomach. The second pill was retained, but attended with no evacuant effect, but with evident remission of pain. A third pill was administered, with apparently similar effect, but the desideratum still absent. Upon the moment of administering the fourth pill, a feeling of intestinal commotion was expressed, which, being solicited, terminated in the dejection of as copious, offensive, and ill-conditioned mass of fæcal matter as I ever witnessed; notwithstanding I gave this fourth pill, and its administration was followed by several motions, but of that hydragogue character peculiar to the action of elaterium. From this period, by the aid of warm carminatives and light nutrient diet, a recovery was effected. This man had suffered heretofore frequently from this disease, and paralysis of the extensors of the fore-arms and hands, with wasting and atrophy of that class of muscles, had been existing for some time previous to the present attack.

In justice to the case reported by Monsieur Rayer, of the Hôpital de la Charité, in your Journal of the 15th of last March, I beg to state that I had doubt of the purity of the croton oil I used. Not having any by me at the time, a neighbouring medical friend lent me some, which, from its appearance, I am inclined to think, from age, had suffered deterioration in its medicinal virtue.

36, *Tottenham-street, Fitzroy-square,*
June 30th, 1834.

UNIVERSITY OF EDINBURGH.

THE following is a list of the Gentlemen (one hundred and ten in number) who received, August 1, the Degree of Doctor in Medicine at this University.

OF SCOTLAND.

Thomas Aitkin—De Motu Sanguinis.
John Allen—On Preservation of Health in Hot Climates.
Thomas Graham Balfour—On Tetanus.
Adam Bell—De Erysipelate.
William Bell—On Apoplexy.
Robert Bell—De Febre Intermittente.
John Bower—On Bright's Disease of the Kidney.
James Wardrop Broughton—De Membranis Serosis.
Robert Brown—On Aneurism.
Robert Callender—On Erysipelas.
Neil Stewart Campbell—On Morbus Coxarius.
Alexander M. Cheyne—De Hydrocephalo Acuto.
George B. Cochran—On Bronchitis.
James Duncan—On Empyema.
Robert Flockhart—On Morbus Coxarius.
Archibald Gordon—On Dysentery.
John Hamilton—On Phlebitis.
James Henderson—On Dyspepsia.
Robert Hood—On Asthma.
Robert C. Hope—On Excision of the Joints.
James Hunter—On the Homœopathic Doctrine.
John Hutton—On Fractures of the Leg.
James Inglis—On Pulmonic Emphysema.
John Johnson—On Diabetes.
John Johnston—On Acute Rheumatism.
William D. Kerr—On Phthisis Pulmonalis.
John Learmouth—On the Use of Mercury.
David Low—On Fractures.
John Macdonald—De Emeticis.
Eric Mackay—On Mortification.
George M'Laren—On Caries.
Wm. Barclay Miller—On Indigestion.
William Moir—On Uterine Hæmorrhage.
David Morice—On the Cure of Cataract by Solution.
Philip Nelson—On the Sabulous Sediments of the Urine.
Patrick Small Keir Newbigging—On the Causes of the Impulse and Sounds of the Heart.
John Paxton—On Burns.
Andrew Plummer—On Bronchitis.
Robert Purdie—De Apoplexiâ.
George Gordon Robertson—On Inguinal Hernia.
James Robb—De Pneumonitide.
Peter Russell—On the Cutting Gorget.
Charles Freebairn Sloane—On Stricture of the Urethra.
Elliot Stavert—On Hepatitis.
Robert Hibbert Taylor—On removing Calculi from the Bladder.
William Thomson—On Mental Diseases.
Thomas Watkins Wilson—On Delirium Tremens.

FROM ENGLAND.

Edward Ferrand Astley—On Synovial Membranes.
William Richard Basham—On the Agency of the Atmosphere on Vegetable and Animal Life.
William Bullar—On Acute Pericarditis.
Francis Burridge—De Vermibus qui infestant Corpus Humanum.
William Charles Callow—De Iritide.
John Cargill—On Peripneumonia.
William Barnard Clarke—On the Vital Principle in Animals and Vegetables.
John Davies—On the Employment of the Oxide of Antimony in the Treatment of Pneumonia.
David Durrran—De Abortu.
John Exley—On Puerperal Fever.
James Fyre—On Pneumonia.
John Speed Frowd—On Lateral Curvature of Spine.
Railton Gill—On Diseases of the Stomach.
Henry Hadley—On Inflammation of the Mucous Coat of the Intestinal Canal.
Thomas Sunderland Harrison—On Urinary Calculi.
William Hawkins—On Germination of Seeds.
William Edward Hunter—On the Varieties of the Human Species.
George Livingston—On Epilepsy.
John Matheson—On Insanity.
Thos. A. Nelson—On Phthisis Pulmonalis.
John S. Newbold—On the Nature and Properties of the Blood.
Henry H. Parkin—On Cholera.
Ralph Richardson—On the Proximate Causes of Asthma.
John Rogerson—On Obstruction of the Liver.
Thomas Rowley—On Gout.
Edward John Scott—On the Varieties of the Human Species.
Charles Spelman Smyth—On Rheumatism.
James Tetley—On Apoplexy.
Robert Wood Thacker—De Pleuritide.
Henry Tyser—On Paralysis.
William Morgan Underwood—On Erysipelas.
Robert Verity—De Membranarum Consensibus *.
George Wharton—On Asthma.
George Wilson—De Cynanche Tracheali.

* Passed his trials in 1833.

FROM IRELAND.

George Thomas Beilby—On Polypous Tumours.
Henry Brown—On Hydrocele.
Ebenezer N. Bolton—On Apoplexy.
Dyonysius Colahan—On Inflammation of the Mucous Membrane of Stomach and Bowels.
Samuel Dean—De Hydrophobia.
Hercules Elmore—On Stricture of Urethra.
John Hamilton—On Bronchitis.
William Hay—On Pneumonia.
Francis Healy—On Scrofula.
David Jamieson—On Inguinal Hernia.
Joseph A. Lawson—On Callus.
William Lloyd—On Peritonitis.
George Martin—On Peripneumony.
Robert Marshall—On Tetanus.
James Robinson M'Cord—On Hydrocephalus.
Richard Mollan—On Dropsy.
William Chapman Murphy—On Apoplexy.
John Nalty—De Membranis Mucosis *.
David Quill—On Apoplexy.
Charles Warburton Riggs—De Erysipelate.
Patrick Roe—On the Influence of Age on the Human Constitution.
Thomas Rossiter—On Jaundice.
John Robert Young—On Mortification.

* Passed his trials in 1826.

FROM ABROAD.

Ludovico de Carvalho Paez D'Andrade, Brazil—On Dysentery.
Archibald Hall, Canada—On Respiratory Function of Plants.
William King, West Indies—On Erysypelas.
William Pakenham Monk, Island of Guernsey—On the Medical uses of Secale Cornutum.
Edward Auriol Robertson, Portugal—On Enteritis.
William C. Trotman, Barbadoes—On Metastasis.

Foreign Medicine.

Digitalis in Dropsy.

M. Chrestien states that he has cured a great number of dropsies, consequent on abdominal phlegmasia or intermittent fevers, by the use of the tincture of digitalis in frictions on the abdomen, or inner part of the thighs; half an ounce three or four times a-day. His formula for the tincture is as follows:—take an ounce of the digitalis purpurea, and three ounces of alcohol, and let it macerate. M. Chrétien considers that digitalis is a general excitant, and has besides specific powers, which cause an abnormal secretion of urine, and diminishes the frequency of the heart's action. If this latter effect does not take place, it is owing to an irritable condition of the alimentary canal. —*Revue Médicale.*

An order has recently appeared in the Bulletin des Lois, placing at the disposal of the Minister for Public Instruction the ground comprised between Rues de l'Est and de l'Ouest, at Paris, known by the name of Pépinière Royale du Luxembourg. The eastern part of this ground is destined for the formation of a medico-botanical garden for the use of the Ecole de Médecine, and the western parts for natural history, for the same establishment.—*Gazette des Hôpitaux.*

Camphor obtained from Parsley.

If fresh oil of parsley be placed in contact with water, it will be changed into camphor in the course of a few days. This product can be separated from the water by filtration, and dried on bibulous paper; dissolved in alcohol, it crystallises in prisms and needles; it dissolves at + 30°, and it requires a much lower temperature to become solid again; at + 21° it enters into ebullition; at + 300° it assumes a brown colour, but does not sublime. Its composition is six atoms of carbon, seven of hydrogen, and two of oxygen. —*Journal de Pharmacie.*

Civiale.

The King of Sweden has presented this celebrated lithotritist with the cross of the Polar Star, the highest mark of honour ever conferred on a savant in that country, and it may be regarded as a proof of the success of lithotrity in Sweden.—*Gazette des Hôpitaux.*

Suture of the Perinæum.

Dr. Mineogliano, having read that M. Roux had cured several cases of ruptured perinæum, consequent on parturition, resolved to follow his example, with this exception, that he used the hare-lip pins, instead of the sutures recommended by Roux. The case fell under his care the second day after the rupture; the pins were kept in ten days; the operation

was successful. The patient afterwards became pregnant, and was delivered without injuring the cicatrix.—*Op. Med.*

Quarantine.

The following order has been published in the Moniteur:—

"Taking into consideration that, since the occupation of Algiers by the French army, precautionary sanitory measures have been adopted at the different ports of that country to prevent the importation of the plague, that the country of Algiers is generally healthy, and that therefore there is no reason to consider its ports dangerous.

"Vessels coming from Algiers, Bona, Bougie, and Oran, may be admitted into all the ports of this kingdom, provided they have clean bills of health, given them by the local authorities."

This order may be considered as a step towards the opinions of Messrs. Chevrin and Lassis, and undoubtedly owing to the recent researches and labours of the former of these physicians.—*Gazette des Hôpitaux.*

TARTAR EMETIC IN CHOLERA.

Although not in the habit of paying particular attention to the letters of medical men, which appear in the public journals relating to the treatment of diseases, we are induced to break through our rule, in order to notice an interesting letter of Mr. Rowe, which appeared in the Times of August 4th. In it he details the case of a gentleman in the Legacy Office, who was suffering from a severe attack of cholera. The solution of the acetate of morphia at first tranquillised the spasm; and, afterwards, the tartarised antimony plan of Mr. Langford was commenced, and followed up with great accuracy. On the Friday and Saturday the patient had purging and cramps, on the Sunday was seriously attacked, on the Tuesday morning he passed some bile in the stools and made water; his amendment was afterwards interrupted only by some irritability of the stomach, which was relieved by leeches.

Several medical practitioners of our acquaintance have tried Mr. Langford's plan, and speak favourably of it. They consider it equally applicable in the premonitory stage, as in the more advanced stage of collapse.

ABSENCE OF CERVIX UTERI IN LABOUR — VAGINAL CÆSAREAN OPERATION SUCCESSFULLY PERFORMED.

BY DR. CAFFE, OF PARIS.

I was sent for by Madame Mouray, midwife, on the 4th December, 1833, to the house of a patient, No. 110, Vielle Rue du Temple. The patient was nearly 40 years of age, and of good constitution; had borne three children, the last 8 years since, and had now been in labour 30 hours. The midwife, unable to feel the mouth or any orifice in the uterus, had previously obtained the assistance of a medical man, who, believing there was an antiversion of the uterus, had recommended the introduction of a pessary. I examined her in various positions, but, neither with the finger nor a small blunt-ended probe, could I discover any orifice in the uterine tumour. The vagina was five inches long, dry, but swollen on its upper surface, where the mucous membrane projected considerably. Uterine contraction was regular and active. This was at 6 A. M. Judging that the vaginal Cæsarean operation was here indispensable, I desired a consultation; and at 8 o'clock, M. Hatin saw the patient with me. We fixed the hour of 4 P. M. for the performance of the operation; but as the contractions of the uterus were not then of alarming violence, we agreed still further to postpone it, and, while the midwife carefully watched the patient, to moderate the pains and prevent improper motion, we sought the counsel of MM. Velpeau, Lenoir, and Larcher, who successively examined the patient, and confirmed the accuracy of my diagnosis, and the necessity of operating. Accordingly, at 11 P. M., I proceeded to the operation in the presence of MM. Hatin and Roussel, and M. Pertusio, an Italian physician.

The speculum could not be employed, on account of the projecting mucous membrane and the extreme narrowness of the vagina. I used a straight narrow bistoury, with linen wrapped round it to within half an inch of the point, which was protected by a small piece of wax. The uterus was divided, layer by layer, to the extent of about half an inch, in a line, betwen the rectum and bladder, its contractions assisting the division. On

arriving at the cavity of the uterus, about four ounces of liquor amnii were discharged; and the head of the child was distinctly felt by all present. To avoid and prevent laceration, I again introduced the knife, and practised two short lateral incisions, so as to convert the aperture into a crucial one; which shape, however, was immediately effaced by a pain which rendered the aperture oval, and enlarged it considerably, but without any tearing of the edges.

The woman felt no pain during the operation, nor was there the least hæmorrhage; in an hour afterwards a living child was born. The uterus, in contracting after delivery, greatly diminished the extent of the aperture; recovery was rapid and uninterrupted by any accident. As soon as the lochia had ceased to flow, I took the precaution to introduce occasionally between the lips of the aperture a gum elastic bougie, which was allowed to remain several hours. The aperture can be felt small and irregular, surrounded by no projection or trace of the neck of the organ. At the end of six weeks the catamenia appeared, and have since recurred. As regards the cause of this obliteration of the neck of the uterus, it was with the greatest difficulty that I could ascertain from the patient, that she had, during the early months of pregnancy, been in the habit of injecting a solution of common ashes (*cendres de foyer*) into the vagina, and even into the cavity of the uterus, (?) by means of a gum-elastic catheter; that she had felt each time intolerable pain, and had observed suppuration and the detachment of portions of the skin.—*Abridged from the Journal Hebdomadaire.—Archives of Medicine.*

THE

London Medical and Surgical Journal.

Saturday, August 16, 1834.

REPORT OF THE PARLIAMENTARY COMMITTEE.

At length the labours of the Committee on Medical Reform are brought to a close. On Wednesday last (August 13), Mr. Warburton brought up the report, which was ordered to be printed.

During the recess the profession will have ample time to consider its matter, so that in the next session every preliminary to rational legislation will have been provided. A new track of duty is now open to us—that of impartially canvassing the evidence, to which we have hitherto been silent listeners. We have often had to speak in terms of unqualified approbation of the conduct of the Honourable Chairman, in the discharge of his difficult and intricate duty. His liberal and comprehensive investigation, his impartial demeanour to witnesses of all characters, his forbearance with the petulance of some, and the manifold impertinences of others—besides his admirable tact and judgment in conducting the examination, have earned for him the lasting gratitude of the profession.

PETITION OF THE LECTURERS—MODEST CIRCULAR IN CONSEQUENCE.

A consummate politician once observed, that if there was no such thing as honesty it ought to be invented; so true is it that honesty is in the long run the best policy,—"There be," says Lord Bacon, "that can pack the cards and yet cannot play well; so that there are some that are good in canvasses and factions that are otherwise weak men." One of the shops of these haberdashers of small wares, as the same eminent person calls the folk we are talking of, it is our business now to set forth.

It cannot be forgotten with what secrecy, in its concretion, a certain meeting of certain lecturers in London was got up for the purpose of opposing, by petition, the grant of a charter of incorporation to the London University. After the meeting of the elect was held, every effort of personal canvas was used by an individual,

whom we need not name, to add to the list of petitioners the names of gentlemen who abstained from complying with the original requisition, on account of their distrust of the prime movers, till at last by urgent solicitation a list of ninety-eight names was obtained. The petition was at length presented; and then—what disgusting vapouring had we not, touching the value of this important document, that embraced and, in fact, exhausted the whole argument against the London University,—a model of calm and dispassionate reasoning! With what ostentatious flourishes did not the self same nameless person ring the changes in praise of his own bantling! How uncandid, how dishonest in his sight were the cotemporary journalists in declining to print this inestimable abortion of his brain! We, it so happened, had always opposed the claims of the University to the power of conferring degrees, because it appeared to us, the grant of such a privilege to a particular school would inflict immeasurable evil on the republic of medicine,—even we were censured for not noticing a document, all knowledge of which was designedly withheld from us; and then, forsooth, our generous, high-minded, liberal cotemporary had the judgment and spirit, out of the fulness of his heart, to attribute to us motives of personal pique and resentment for our silence, because, he alleges, he had not canvassed us among the other dupes of his crooked policy! This flagrant outrage of all honourable feelings we passed by at the time with the contempt it deserved.

Let us now see to what a happy issue the affair has been brought,—how much reason each of the other ninety-eight petitioners has to thank our cotemporary for his admirable manœuvring. After a world of bustle the petition was presented, and certain expenses incurred in instructing counsel to support its prayer. The patronage of all this business was exceedingly pleasant. At length comes the day of reckoning, and with it a circular to the subscribing petitioners, modestly requesting from each of them the moderate sum of 4*l.* 10*s.*,—the price of the indulgence he received in being allowed to sign his name to the petition, at the request and importunity of our cotemporary and his agents. It is not improbable the greater number of the *select* lecturers will aver a *non sequitur*:—"we never dreamed we were incurring such a responsibility in putting down our names;—the whole affair has been a surprise to us:—let those pay whose vanity has been gratified; we will not be made stalking horses for their self-importance."

The circular, of which we append a copy, is a very curious specimen in its way. There is something so honest and true in its statement, that "the teachers of the various medical schools in London were summoned to attend at Dr. Hue's:" and again, there is something so very consolatory in the reflection, that the College of Surgeons incurred precisely the same expense as the select lecturers in making similar opposition, that the unfortunate petitioner cannot complain:—the allegation is as true as it is notoriously false:—the charges are reasonable:—the subscribing petitioner was not cajoled out of his signature!

Here is the circular:—

"*July*, 1834.

"Sir,—On the renewal of the petition of the London University to the King in Council, for a charter, with the power of conferring degrees in physic, &c., a meeting of the hospital physicians and surgeons, and of the teachers of the various

medical schools in London, was held at Dr. Hue's, on the 28th day of February last, at which meeting we the undersigned were named as a sub-committee for preparing and presenting a memorial, on the part of the whole body, praying that the privileges which the London University was endeavouring to obtain might not be granted; and that we might be heard by counsel before his Majesty's Privy Council in support of our prayer. The expenses that have been incurred by the defence of our cause before the Privy Council greatly exceed what we had anticipated; but we find that the expenses of the College of Surgeons in opposing, in the same manner, the prayer of the London University, have been precisely the same. The whole expense incurred by us is 440*l.* 15*s.* 6*d.*; and the number of gentlemen who signed the memorial praying to be heard by counsel is ninety-eight; so that the contribution required from each individual is 4*l.* 10*s.* You will therefore have the kindness to transmit the amount to Sir George Tuthill at your earliest convenience.

"The accounts lie at Sir George Tuthill's, and are open to the inspection of every gentleman who signed the memorial.

(Signed) "Geo. L. Tuthill.
"Thomas Watson.
"Wm. Lawrence."

HOSPITAL MISMANAGEMENT.

The hospital fracas at Guy's and St. Thomas's, to which we alluded in our last number, have again fixed public attention on the mode in which our great medical charities are managed, or rather mismanaged, under the auspices of treasurers and their committees. The present disputes arise, we understand, out of the hospital schools, in which the treasurers, by a strain of authority, claim and assert the right of interfering! Dr. Elliotson and Mr. Green are determined to abide by their respective universities; and hence they are obliged to relinquish their duties at St. Thomas's Hospital.

Dr. Blundell has had an assistant appointed to him, whether he would or no; and therefore this eminent practitioner has resolved to leave the assistant a clear stage. Were we not certain that the abuses of hospital government are upon record, and will shortly come to light, we should think these matters worthy of being further sifted. In the present state of things, not much further harm can be done by letting the busy bodies pursue their ordinary avocations for the short time we expect their power will subsist.

COUNTY CORONERS' BILL.

After the opinions we have on a former occasion expressed upon the present constitution of the office of Coroners, we entertain very little regret that the bill on which we then commented, in its progress through the House of Commons, has been since lost by a difference between the two houses upon a clause declaring the Coroner's Court an open court. Lord Brougham, a very high judge, and others, very eminent lawyers, differ as to the fact—and his Lordship is deeply concerned that *he* cannot agree with the House of Commons upon the policy of throwing open the court. His Lordship and the House of Commons have unfortunately had latterly various differences of opinion. A certain degree of vanity, and the habits acquired by his Lordship in another place, where, of course, he meets with implicit deference, where, in fact, *his* opinions are law, make

his Lordship very sore on such occasions. Nevertheless, we are of Mr. Warburton's opinion, that if the Coroners' Courts were not held to be open, great facilities would be afforded to those holding so responsible a situation, to receive bribes in order to protect the guilty, which was more to be deprecated, *as Coroners were not like the judges, chosen from the higher ranks of life, but very often notoriously persons of very insufficient education.* The Attorney General declared his opinion that Coroners' Courts were open courts, Coroners having the power, on particular occasions, to close the court, in the same way as judges of other courts of record. A declaratory clause to that effect ought to be introduced, requiring, at the same time, that the Coroner should report to the Court of King's Bench, or the Secretary of State, what passed in his Court when the doors were shut, and the reasons which induced him to exclude the public on any particular occasion. The question will be revived next session.

CASE OF INJURY OF THE SPINE.

BY R. J. KING, ESQ., SURGEON, WHITEHAVEN.

9 P. M., June 17th, 1834. W. F——, ætat. 21, cabinet-maker, was knocked down this afternoon, between two and three o'clock, whilst fighting in a beer shop, when he "felt something crack and give way in his neck;" since then he has suffered much pain at the lower part of his neck and between his shoulders, attended with the loss of sensation and motion of the trunk and lower extremities, and also of the upper, with the exception of rotation of the humerus on the scapula; priapism and paralysis of the bladder; there are also several contusions over the head and face. He is lying upon his back on the floor of the room where he fell; answers when spoken to, and complains of being very cold. Pulse 90, small and irregular; skin cold; respiration appears to be carried on solely by the diaphragm; there is no motion in the upper part of the chest. He is a stout young man, of very intemperate habits, and has been drinking for the last three days.

Ordered a mattress to be placed upon the floor; had him carefully put upon it, and covered with bed clothes. To have some warm tea, and to be kept perfectly quiet. A catheter was introduced, but no urine flowed.

18th. 9 A. M. Pulse 80, regular, and of better strength; the skin is now pungently hot; abdomen distended. A catheter was introduced, and about a pint of urine drawn off by pressing upon the abdomen.

Sumat pil. cath. ij., statim et tertiâ quâque horâ.

3 P. M. Has taken six pills; no evacuation from the bowels; the last dose occasioned considerable nausea and severe efforts to vomit; after much struggling about the stomach and diaphragm, a small quantity of clear fluid was vomited. Urine about O ss. by cath.

℞. Olei terebinth. rect. ʒvj.
—— ricini ʒij.
Mucilaginis acaciæ, q. s.
Aquæ fontanæ Oj.
M. fiat. Enema statim.

9 P. M. Complains of burning pain in his hands, and requests they may be washed with cold water and soap. The distension of the abdomen has increased very much since the morning; no evacuation from the bowels.

℞. Olei terebinth. ʒiv.
Liniment. saponis comp. ʒxij.
M. fiat. Liniment. abdomini infricandum.

℞. Pulveris jalapæ ʒj.
Magnes. sulph. ʒij.
Aquæ ferventis Oj.
M. fiat. Enema tepida injec.

10 P.M. On introducing the pipe into the rectum a considerable quantity of flatus escaped, and this, together with the drawing off of about half a pint of urine, afforded much relief; is perfectly sensible, and feels inclined to sleep; has taken some arrow-root, and tea with softened buiscuit, at different times during the day.

19th. 1½ A.M. Is very uneasy; the distension of the abdomen very great, and renders his breathing extremely short and difficult; his face is much flushed, and he has been muttering and talking to himself; pulse 84, full and soft, stronger than yesterday; tongue dry and white; thirst; no evacuation from the bowels. A large elastic gum catheter

was introduced into the rectum; much flatus and a quantity of fluid mixed with feculent matter came away (above Oij); distension much relieved. A vein was opened in the right arm, and he felt the puncture of the lancet *; about ℥xij. of blood were taken away, and it had the florid appearance of arterial blood; expresses himself much easier. Pulse 80, full and soft.

6 A. M. Is very uneasy; the distension has returned; cath. introducta. Oj. of high coloured urine with violet odour; when the tube was passed into the rectum, much flatus, and some fluid fæces came away; feels relieved, and inclined to sleep.

9 A. M. Pulse 80, full and soft; tongue white, moist; face less flushed; skin pungently hot and dry over the body and extremities, and perspiring over head and neck; on taking a drink, part of the fluid passed into the larynx, and occasioned very great uneasiness; as he cannot cough, he struggled violently with the diaphragm and muscles of the neck and face in endeavouring to blow it out.

2 P. M. Catheter introduced; O ss. of high coloured urine; the lower bowels were washed out by injecting warm water, without bringing away much feculent matter.

10 P. M. Pulse 80, full and soft; tongue white and dry in centre, moist at edges; thirst; breathing not quite so good as in the morning; less tension of the abdomen, but still complains of being swelled; urine about O ss.; on the tube being passed into the rectum, some flatus escaped; the warm water which was injected returned without any feculent matter; the hypogastric region is now perfectly soft and comfortable; still some fulness at the epigastrium and across the umbilical region.

20th. 6 A. M. Has had a better night; he complained of pain in the fore and middle fingers of the right hand, where they had been bruised, and requested they might be dressed; thinks there is more pain between the shoulders; pulse 72, full and soft; tongue brown, and dry in centre, moist at edges; thirst; less swelling of the abdomen. Urine two-thirds of a pint.

2 P. M. Urine two-thirds of a pint.

10 P. M. Complains much of his throat, but has no difficulty in swallowing; feels cold about his head and neck; pulse 62, full and soft; skin hot and dry; there has been no moisture over the surface of his trunk and extremities since the accident; constant thirst; calls to have his lips and tongue moistened frequently; abdomen soft; stools passed involuntarily. Urine about two-thirds of a pint.

21st. Half-past 3 A. M. Has had some sleep during the night, but is now very restless; abdomen much distended; says his throat is a little better; pulse 72, full and soft; no evacuation from the bowels; urine about O ss., and about the same quantity of liquid fæces passed through the tube when introduced into the rectum, and pressure was applied to the abdomen; no flatus passed.

10 A. M. Appears to be much worse; breathing short and hurried; does not answer when spoken to, but shakes his head; swallows with great difficulty the fluid with which his lips and tongue are moistened; gives him much uneasiness from its obstructing his breathing.

1 P. M. Is very uneasy; face flushed, and he complains of pain in his head; answers readily. Pulse 80, full and soft; skin cooler and rather moist for the first time since the accident; breathing very difficult. A vein was opened in his right arm, and when about ℥iv. of blood were taken away, he said it increased the difficulty of breathing; it was darker coloured than the former, and had much the appearance of venous blood, although still very florid; urine about O ss.

6 P. M. Is evidently much worse; the fæces are passed involuntarily, and the priapism has ceased; urine two-thirds of a pint.

10 P. M. Has been delirious, and is now talking to himself, and calling out frequently; answers when spoken to, but his voice is becoming very weak; is sinking; pulse 80, soft; hands cold; feet and legs hot; urine about O ss. He spoke but once or twice after I left him, and died at 12 P. M.

Post-mortem examination, 34 hours after death.—The posterior surface of the body and limbs was of a dark livid colour, from the

* This is rather doubtful; the question was put by his brother, and he answered yes; he did not feel when his arm was pinched, and the only way in which he knew it to be touched was by its shaking his shoulder.

gravitation of the blood, which was found to be in a fluid state; much bloody fluid also flowed out of the mouth on turning the body over; on making an incision along the spinous processes of the cervical and dorsal vertebræ, a considerable quantity of extravasated blood was found in the cellular membrane, and much gas escaped; the ligaments connecting the oblique processes of the sixth and seventh cervical vertebræ were ruptured, and their articulating surfaces separated from each other about the eighth of an inch: the fifth and sixth were also injured, but to a less extent; the outer surface of the sheath of the spinal cord was covered with coagulated blood. On opening the sheath, the arachnoid membrane covering the cord was highly injected for the extent of about three inches, and the medullary matter of the cord softened and in a semi-fluid state for about the same extent, how much further it might extend down the chest was not ascertained, as we only removed the rings of the cervical and two upper dorsal vertebræ. The bodies of the sixth and seventh cervical vertebræ had been torn asunder, but without any lateral displacement, the cartilage of the sixth being broken off at its posterior margin, and a small piece of the bone adhered to the separated portion. On opening the chest, some extravasated blood was found in the cellular membrane at the top of the sternum, and also in the upper part of the anterior mediastinum; there were some old cellular adhesions in the right pleura, and each pleural cavity contained about four ounces of a dark bloody fluid; there was also about one ounce of the same kind of fluid in the pericardium. The lungs were very dark coloured, particularly posteriorly, from the gravitation of the blood. Both ventricles of the heart contained a small quantity of dark fluid blood, with which the lining membrane was stained of a purple colour. The viscera of the abdomen appeared to be healthy; the stomach and intestines were distended with air; bladder empty. Head not examined.

Remarks.—From the nature of the injury and the symptoms which accompanied it no hopes could be entertained of his recovery. The treatment, therefore, was more directed to relieve urgent symptoms and to contribute to his comfort, than with any prospect of its ultimate success. After the brain and nervous system (above the situation of the injury) had recovered from the shock of the accident, the circulation, respiration, digestion, and the secretion of bile and urine, appeared to go on until the inflammation of the spinal cord extended above the origin of the phrenic nerves, when the breathing became hurried and difficult, and at last was entirely suspended, and death ensued, leaving the blood of a dark colour and uncoagulated. The blood drawn from a vein in the right arm (the vena cephalica) on the morning of the 19th, 36 hours after the accident, appeared to have undergone no change from the time it passed into the humeral artery; after standing some hours, the crassamentum presented one uniform fluid, red colour throughout; the heat of the skin below the injury of the spine was much above the natural standard, pungently hot and dry, without the least tendency to perspiration; the blood drawn from the same arm on the 21st, ninety-six hours after the accident, had more the appearance of venous blood, although still more florid than natural; the skin was then cooler, and there was a little moisture on the surface; the breathing, however, was very difficult. Such being the symptoms and appearance of the blood which accompanied the elevation of temperature over the surface of the body, and also during its decline, how far do they agree with the theory of animal heat? The change from arterial to venous blood, along with the reaction from the skin, appear to have had a cooling effect on the temperature of the body. Mr. Brande says, that in the experiments of Mr. Brodie, where the respiration was kept up by artificial means, after the decapitation of an animal, "the heat of the body cooled regularly and gradually down to the atmospheric standard. The circulation went on; there was the change of oxygen into carbonic acid, and the alteration of colour in the blood, and yet no heat whatever appeared to be generated; the secretory functions were suspended."

In the present case, the blood was circulated through the trunk and extremities, which were deprived of the influence of the nervous system, or at least of that part of the nervous system which presides over the functions of animal life. No change was effected in the colour of the blood, whilst circulating

through the right arm, and I suppose it would be the same in the other limbs, as they were all equally involved in the accident, yet the evolution of heat went on even beyond the natural temperature, being undiminished by the cooling power of the perspiration, which I believe is universally acknowledged to have that effect. Does the heat of the body depend on the circulation of arterial blood under the influence of the nerves of organic life (which we all know are so intimately connected with the coats of the larger arteries, and may very probably accompany ramifications far beyond our ken) ? and is it modified according to the exigencies of the individual, by the controlling power of the cutaneous secretion ? which in the present case was suspended, the blood was consequently returning to the heart undeteriorated, and the generation of heat unchecked. My attempt at reasoning upon the phenomena related above may very probably be far from arriving at a correct conclusion. The facts, however, are there: and if they have the effect of directing the attention of some more intelligent member of the profession, and who possesses a more ample field for observation, in such a manner as to throw some further light on the hitherto hidden function of animal heat, the object of my communication will be fully attained.

British Hospital Reports.

ST. THOMAS'S HOSPITAL.

Bronchitis—Ascites—Tapping—Death from Wounding the Epigastric Artery.

On the 20th of February last, Edward Greenland, aged 25, of dark complexion, was admitted by Dr. Elliotson into William's Ward, with cough, dyspnœa, and slight peritoneal effusion. Has been, from his own account, subject for the last two or three years, more especially during the months of November, December, and January, to cough and difficulty of breathing, but for the last four months the severity of these symptoms have increased, and the attacks of difficulty of breathing have become more frequent. At the present time he does not expectorate much, has considerable difficulty of breathing, and is unable to lie on the right side. By auscultation sonorous respiration may be distinguished over the whole of the chest, accompanied on the right side with loud crepitation ; action of the heart regular, no morbid sound of this organ can be detected ; at the scrobiculus cordis he complains of pain, which by pressure is not increased ; pulse small and weak ; countenance of a bluish hue ; tongue white, but moist. By percussion on the abdomen, slight fluctuation was evident, though the effusion appeared but in very small quantity. Dr. Elliotson ordered ten leeches to his neck ; and prescribed tinct. digitalis ℈j., tinct. scillæ ℈j., acet. potass 3ss., to be taken three times a-day, also five grains of the hydrargyrum c. creta ; and for diet, he was allowed half milk and half dry.

25th. After the application of the leeches his breathing became easier ; still he complained of pain in the scrobiculus cordis, for which a blister was applied over this region.

On the 28th, his mouth became slightly affected ; pain in the scrobiculus cordis less violent since the application of the blister, but now all over his abdomen complains of pain ; bowels since yesterday open five times, alvine dejections watery, but the fæcal matter contains sufficient bile. One dose of the compound chalk mixture was administered at bedtime, after this his bowels became confined ; this state of constipation did not last long, though he had not taken any medicine, and had discontinued his pills since the 28th. To-day, March 7th, has been suffering from pain in the epigastric region, for which another blister was applied over this part.

The difficulty of breathing since the 10th has become more intense ; cannot lie down in consequence of the severeness of the paroxysms ; abdomen more tense, and the whole of his body anasarcous ; action of the heart within the last few days much increased in violence ; disturbed rest ; pulse 90, irregular. Dr. Elliotson prescribed for him ten minims of the tinct. lobelia inf. This a tfirst gave him a little relief, but a day or two after taking it no great benefit could be obtained from its use. The inflammation of the bronchial membrane became more acute. It is right, however, to say, that the medicine had been increased to twenty drops every hour. Respiration was imperfect on the left, but on the right a sibilous state was manifest. To counteract these symptoms, bleeding and blistering were adopted. Since the commencement of March, attention has been drawn to the right side, in consequence of enlargement of the liver, for which the iodine ointment has been used.

April 1. The paroxysms of difficulty of breathing continue, mucous and sibilous noise still heard in the chest. The use of the

lobelia inflata was persevered in, in consequence of its allaying the asthmatic spasms; and for the inflammatory state of the bronchial membrane he was cupped to the extent of eight ounces between the scapulæ. Abdomen much more tumid than when admitted; fluctuation very evident; legs become extremely anasarcous, for which acupuncturation was employed, and the lobelia inflata has been increased to two scruples three times a-day, from which he experiences almost instantaneous relief.

On the 23rd of May Dr. Elliotson saw him. The dyspnœa, although temporarily relieved, after taking the æthereal tincture of the above medicine; still the attacks were more frequent, and have continued to increase, since his abdomen has become more distended with fluid; therefore Dr. Elliotson requested the operation of tapping to be performed.

The next morning, on the 24th, the operation was performed, after which all symptoms became ameliorated.

The use of the same medicines was persevered in; his abdomen became again distended with fluid, and for it again the operation was performed.

On the 26th of July, five weeks from the last operation, the same means became again necessary, and the operation of paracentesis was now ordered; and, after the operation, eleven quarts of serous fluid, not tinged with blood, escaped from the peritoneal cavity.

The man after the operation became weak and feeble; great anxiety of countenance ensued; his skin became pallid; pulse small and quick; and about the abdomen he complained of a sensation of weight. During the night he remained restless, his skin became clammy, and covered by cold perspiration: the next morning he evidently appeared sinking from loss of blood; countenance more anxious, and exceedingly pallid; eyes sunk in their sockets; pulse fluttering, small, and quick; and in the course of the afternoon he expired.

The cause of so sudden death after the operation remained obscure, and excited not little interest, as the man had been previously tapped twice, without any dangerous symptom supervening. The post mortem examination, which was made in the presence of Dr. Elliotson, proved at once the cause of death; for, on the abdomen being opened, the cavity was found distended by a large coagulum of blood, which, on more minute dissection, was found to have flowed from an unusual branch of the epigastric artery. This latter artery, which arose from the external iliac, a little above Poupart's ligament, while in its descent, and about to turn forwards and upwards, it gave off a large internal branch, which passed obliquely across the ring, gained the side of the linea alba, and continued its course close to the outer margin of this line. Of the cicatrices, which were minutely examined; two were found in the centre of this white line, whilst the third had passed through some of the fibres, a little external to its centre, and had also perforated the side of this internal branch of the epigastric artery, which evidently was the cause of death. Could there have been in this instance any blame attached to the surgeon? certainly not; for, although the exact point of the linea alba was not perforated, yet evidently the external point of the cicatrix was in the centre externally, and the linea alba most probably, from its hardened condition by the previous cicatrices, yielded a little, and caused the instrument to pass in somewhat an oblique direction, which evidently had been the cause of the accident. This neither is not the first time that this accident has occurred, though, for many years, no instance has been mentioned, yet in the Medical Communications, vol. ii. page 482, noticed upwards of 50 years ago, is a very excellent paper on this subject, by Dr. Carmichael Smith, and, as a caution to surgeons and general practitioners, we cannot do better than subjoin it to this case, for many there are, who, perform this operation, think it entirely unattended by danger.

Of the danger of wounding the Epigastric Artery in the Operation of Tapping for Ascites.

"A man, about thirty-six years of age, by trade a blacksmith, was received for an ascites into the Middlesex Hospital: the dropsy was evidently the consequence of a diseased liver, yet he had more the appearance of strength and vigour than is common for persons labouring under this complaint. The usual treatment by purgatives, diuretics, mercurial frictions, &c. had been tried without success, and the patient, suffering great uneasiness from the size and tension of his belly, was ordered to be tapped. Nothing worthy of notice occurred during the operation; but, as a portion only of the water (at the desire of my ingenious colleague, Dr. Milman) was taken away, the canula properly secured was left in the abdomen, and the usual bandages were applied.

"Upon visiting the hospital the day following, I found my patient extremely faint, his pulse very low and quick, and the abdomen almost as much distended as before the operation. Desirous of giving him further relief, the plug, or stopper of the canula, was taken out, but no discharge of water followed. The surgeon supposing that some portion of the omentum probably stopped the orifice of the canula, passed a probe through it without success; in short, after a variety of trials, all in vain, the canula was withdrawn (the extremity of which was filled up by a coagulum of blood), the usual dressings and bandages were applied, and the man had some cordial medicines given him, but he gradually sunk, and died in about eight and forty hours after the operation.

"His death gave me great uneasiness, as I was not without apprehension, that from keep-

ing the canula in the abdomen air had been admitted into the cavity, which had occasioned peritoneal inflammation, and proved the immediate cause of the death of the patient. Anxious to be satisfied of this fact, I ordered the body to be examined. To my great joy there was not the smallest appearance of peritoneal inflammation; and it was evident that the sudden death of the poor man was entirely owing to his bleeding inwardly from the epigastric artery, wounded by the trocar in performing the operation. This accident, which was new to me, I mentioned to the late Dr. Hunter, who said that it was also new to him; but, from the situation of the artery, not at all unlikely to happen; nor could it be avoided with certainty by the most skilful surgeon, as the course of this artery varied so much in different subjects, and there being no resistance to the finger, consequently no pulsation, its place could not be accurately ascertained.

"About a twelvemonth after this misfortune at the hospital, I had occasion to observe the same thing in private practice. A patient, to whom I had recommended the paracentesis, requested that I would be present during the operation. It was performed in the usual manner; but the surgeon was much surprised to observe that the serum was mixed with blood, and that it flowed with great difficulty. Suspecting what had happened, I advised him, after about a gallon of fluid had been evacuated, to desist for the present, and bandage up his patient. In the serum taken away there was a very great coagulum of blood, which showed that the hæmorrhage had been considerable. The patient, however, did not, as in the preceding instance, sink immediately, but lived some weeks after the operation.

"Having been satisfied, from Dr. Hunter, that the accident above related might happen to the most skilful person, I inquired amongst the surgeons of my acquaintance if they had ever met with anything of the kind. Mr. Watson, of the Westminster Hospital, told me he had seen the accident three times; Mr. Howard, of the Middlesex Hospital, said he had seen two instances of it; and another gentleman of the same name, Mr. Howard, of Argyle-street, informed me that he also had seen two instances, in one of which the wound proved fatal, without any external hæmorrhage. I have been told, likewise, that a patient died not long ago at St. Thomas's, owing to the same misfortune.

"But if such an accident occurs, I may say, so frequently, it is a considerable objection to the operation, and it should be a serious consideration with surgeons how to guard against the fatal consequence that is likely to follow wounding this artery. In those cases in which the blood flows externally, coming away with the serum, it is evident what has happened; and if the artery runs so near the surface that it can be easily taken up, such precaution should not be neglected; but where, as in the case I have related, there is no appearance of hæmorrhage, a person that did not know that such an accident might happen, could have no idea of the true cause of the sinking, quick pulse, distension of the abdomen, and sudden death of his patient; and even if he did know it, I am extremely doubtful, when the artery lies very deep, if it could be taken up by a needle, or the hæmorrhage stopped. But I leave this question to be decided by gentlemen who understand the resources of their profession much better than I do; satisfied with having pointed out the fact, and warned physicians of a danger, to which their patients are exposed from the operation of the paracentesis abdominis."

APOTHECARIES' HALL.

NAMES of that gentleman to whom the Court of Examiners granted a Certificate of Qualification, Thursday, August 7th.

Richard Steele Perkins, Burton-upon-Trent.

METEOROLOGICAL JOURNAL.

MONTH. Aug., 1834.	Moon.	Thermom.			Barometer.		De Luc's Hygrometer.		Winds.		Atmospheric Variations.		
7		67	69	63	29·67	29·67	75	79	S.	S.	Fine	Fine	Rain
8		69	71	58	29·60	29·78	82	80	S.S.W.	S.W.	Cloudy	——	Fine
9		66	70	61	29·78	29·82	75	71	S.W.	W.	Fine	——	——
10		65	72	60	29·80	29·76	71	70	S.W.	S.W.	——	——	——
11		71	73	63	29·75	29·75	70	69	S.	S.S.W.	——	——	——
12		70	76	65	29.81	29·75	67	66	S.	S.E.	——	——	——
13		75	78	62	29·67	29·77	64	64	S.	N.W.	——	——	——

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ALL Communications and Books for Review to be forwarded (free of expense) to the Publisher, 356, Strand, near King's College.

THE

London Medical and Surgical Journal.

No. 134. SATURDAY, AUGUST 23, 1834. Vol. VI.

LECTURES

ON THE

PRINCIPLES, PRACTICE, & OPERATIONS OF SURGERY,

BY PROFESSOR SAMUEL COOPER.

Delivered at the University of London, Session 1832—1833.

We are prevented from giving, in this number, the first part of a Lecture intended to complete this valuable and instructive course: it will, however, together with the second part, be inserted next week.—[Eds.]

CLINICAL LECTURES

DELIVERED BY

G. J. GUTHRIE, ESQ., F.R.S.

PRESIDENT OF THE ROYAL COLLEGE OF SURGEONS, &c., &c.

At the New Westminster Hospital.

LECTURE XVII.

[This is the first lecture which has been delivered at the New Westminster Hospital; it will, we believe, be followed by others soon after the building has been made ready for the reception of patients. The contractors gave possession to the trustees rather more than a week since.—Rep.]

In a lecture which I delivered in August last, I stated that I had tied the common iliac artery, and I informed you afterwards that the case had terminated successfully. I made no further remark at that time, because I was still doubtful as to there being a complication of disease, and I therefore determined to keep silence on the case, until I was enabled to verify the completion of the cure by the disappearance of all vestiges of the disease. I regret to say this did not happen: the patient died in the latter end of last April; and I am now enabled to exhibit the drawings which have been made of the diseased parts, and to detail to you the history of the case in full.

The lady had suffered from pain in the hip for a long time—a flying pain, which she considered to be rheumatic. She one day struck the hip by chance against the sideboard, and bruised herself severely, and to this accident she afterwards attributed the formation of her disease. Soon after, she observed that a swelling had taken place: at first as large as a hen's egg, which gradually increased in size until it became as large as her fist, and she also remarked that it pulsated synchronously with the heart. The disease was considered as a common tumour; and she, finding that little could be done for her, determined to come to London.

It was then about as large as a man's head, on the right nates, and its situation was such as to prevent her lying on that side, or even on her back. When she landed at Wapping, it was so uncomfortable to her from its size, that she dreaded coming westward in a coach, and I went to see her. This is mentioned, because after the operation the tumour diminished very much, and became so quiet, that she could get into a coach very well, and without inconvenience or discomfort.

When I paid her a visit I examined the tumour very carefully, and for some time I was very inclined to doubt whether it was a malignant tumour or an aneurism I had to treat; however, I at last came to the conclusion that it was the latter, firmly bound down by the gluteus maximus, which gave it considerable consistence, and rendered the pulsation less distinct, although it was decidedly manifest in every part; and, on putting the ear to it, the whizzing sound attendant upon the flowing of blood into an aneurism could be very distinctly heard; it was very audible previously to an operation being performed.

Under these circumstances, being fully aware that if anything was to be done, it could only be the serious operation of tying the internal iliac artery, I recommended her husband to have a consultation of two or three of the most eminent surgeons in London. He allowed me to call in whom I chose, as he did not know any one. I therefore, as Sir Astley

Cooper, Mr. Keate, Mr. Thomas, and myself, returned together one evening from the Court of Examiners, mentioned the case, and requested they would see the patient; but not in consultation, because, as I was rather doubtful as to the nature of the case, I was anxious they should see her separately; then each could write his opinion as to the nature of the disease, and mine would be there, so that they might see it after each had written his own. My object in this was to prevent any yielding one to the other, which might otherwise take place in a doubtful matter; and I had, as I have already said, some doubts whether the diagnosis was positively correct. These gentlemen saw the patient separately; each wrote his opinion, and at the conclusion we found that there was a difference of opinion. Sir Astley Cooper and Mr. Thomas believed it to be an aneurism, and that the only operation that ought to be performed was that of tying the iliac artery. Mr. Keate had some doubts, and was inclined to consider it a malignant tumour, rather than an aneurism; but, on learning the difference of opinion, he returned the next day, examined the case again very attentively, and came to the conclusion that it was an aneurism, and that the operation ought to be done.

The result of this was, that we decided upon placing a ligature on the internal iliac artery, and the lady went into the Ophthalmic Hospital for that purpose, not as a pauper patient, but merely with the view of having her more immediately under my care; she was to pay her own expenses, and she gave 10*l.* to the institution. I candidly told her that the operation was so severe and so dangerous, that it could not be performed unless she was under proper observation; she had the upper floor of the hospital to herself.

On the 24th of August I proceeded to perform the operation, these three gentlemen, as well as two or three others, being present; and I may now say that she had been seen by a fifth hospital surgeon in this town (a fact I was not aware of at the time, and he also declared it to be an aneurismal tumour, and that an operation was the only thing which could be done. I began by placing her on a table, laying her as much on her back as the tumour would permit, and by making an incision on the fore part of the abdomen, extending from about an inch below the inside of the anterior superior spine of the ilium, carrying it upwards and diagonally inwards towards the edge of the rectus muscle above the umbilicus, so that the incision was between six and seven inches long. I should remark to you that if the incision is made in the side, from the ribs to the ilium, in a straight line, the greatest possible difficulty is experienced in turning over the peritoneum, so as to place your fingers upon the last vertebra; but if a diagonal inclination be given to the incision towards the rectus muscle, not opening its sheath so as to expose it, but carrying the scalpel fully up to that part, then there is room to turn over the peritoneum with its contents, so as to get at the artery.

After dividing the common integuments, the three muscles were, of course, also slit up in layers; the division of the last, the transversalis, was rendered exceedingly difficult, inasmuch as there was little fascia transversalis, and the peritoneum was remarkably thin, as thin, or nearly so, as the common silver paper, which is used for ordinary purposes. On attempting to reach the under part, on the inside of the ilium, so as to push the peritoneum over, I found that it could not be done; in fact, that the tumour had extended inwards, and some bleeding took place from the large veins surrounding it, giving me a caution not to proceed further in that direction. At this moment, in spite of the greatest possible care that could be taken by Mr. Keate, who protected the peritoneum, a little nick took place in it, and the small intestine made its appearance below. I then tried to extend my space upwards; but where the tendon of the transversalis muscle passes directly across to form the sheath from the lower ribs, the peritoneum is usually so exceedingly thin, and so closely attached to it, that it can scarcely be separated, at least not without the greatest difficulty. I knew this from an operation of a similar kind which I performed at the Westminster Hospital the year before, and, in spite of all the precautions I could then take, the peritoneum was injured. I was so well aware of the great probability of its being wounded at this part, that I took double precaution; but, in spite of all the attention that could be paid, this part of the peritoneum was opened, and the right lobe of the liver could be seen through it. The incision on the fore part of the belly was not large enough to admit the two hands, and there were besides two openings in the peritoneum, one above and the other below, each of them much disposed to increase in size by the moving of the patient. The peritoneum, however, being separated a little from the posterior wall of the abdomen from the outside, four fingers of one hand could be introduced under it, and turned a little over to the opposite side.

There is here a point of great importance to recollect, and it is, that the peritoneum must be raised over without pushing the hand further back towards the posterior wall of the abdomen than is absolutely necessary; for there is some fat usually at that part, if there be any in the body, behind which you are very apt to get in performing the operation, instead of going in front; if you should do this, it will lead you to the under edge of the psoas muscle instead of the upper, and render the completion of the operation much more difficult.

The peritoneum being now separated from behind, and carefully turned over, I found I could only get one hand, or a little more, un-

derneath it in search of the artery, and that no more room could be obtained by increasing the incision upon the fore part of the abdomen. Under these circumstances, it was very clear, that to seek in the dark for the internal iliac artery, which can hardly be found at any time but with difficulty, was not likely to be attended with success, and I therefore determined to place a ligature on the common trunk of the artery. In order to effect this, I separated the peritoneum, passed my finger across the psoas muscle until it rested on the fifth lumbar vertebra, and I now thought, of course, that I should find the common iliac artery; it was not, however, to be felt. I passed my finger up as high as the fourth lumbar vertebra, expecting that I should find the end of the aorta; but even that could not be felt, from a circumstance that I was satisfied had occurred in the previous operation, which is not known in surgery, but which I will now state: it is that the common iliac artery rises with the peritoneum, and I believe the vein does not. My finger, then resting upon the spine, was beneath the vessel I was searching for. Mr. Keate endeavoured to raise the peritoneum, to give me an opportunity, if possible, of seeing the vessel, but that was quite out of the question; the incision, however long, was not sufficient to allow of this being done. However, on raising the peritoneum a little, he felt the pulsation of the external iliac artery; and I now, by passing my finger upwards, found the common iliac adhering to that membrane. I separated it carefully with the point of the fore-finger of the right hand, and with the finger and thumb of the left—for no more room could be given—I then passed the aneurismal needle, and placed a common thread ligature (now on the table) round the artery: this was done without seeing it. In an operation like this, you must have your eyes at the end of your fingers, and your head in your hand. I was enabled to bring the artery a little forwards, by means of the aneurismal needle, which was underneath it; and, in this manner, it was brought into view. It appeared to be perfectly clear; and I calculated, from feeling the division of the aorta above, that the artery was tied exactly in the middle.

I now requested Sir Astley Cooper to satisfy himself it was the artery, which he did. I then asked Mr. Thomas to do the same; but he turned up his eyes, as much as to say, "you are about in as pretty a scrape as any man who has committed legal murder." However, the ligature which is before you was applied around the artery, and the pulsation ceased. I then asked Sir Astley Cooper to ascertain, whether the pulsation had ceased? and he said, "Perfectly; there was not the slightest to be felt." The ligature was twisted, the peritoneum pushed down to its place, and the parts brought together, care being taken that the two cut portions of the peritoneum should be pushed well under the skin, so that they might not be in the line of the incision, and that they might be covered with fresh parts, so that they might adhere one to the other. Three long sutures, and three or four smaller ones, were put in just through the skin, in order to prevent the possibility of the parts bursting asunder from the motions of the patient. Thus this, the most formidable operation I ever performed, was accomplished. It was not the hæmorrhage which made it formidable, but the fact, that room could not be got for the introduction of the two hands; and, strange as it may appear, the whole safety and ease in doing this operation consist in the incision being so large in the forepart of the belly, that the bowels and peritoneum may be freely turned over by the two expanded hands, so that you can see what is going on beneath. In the former case, the whole parts could be seen in the peritoneum distinctly, and several gentlemen, not in the profession, saw the iliac artery in its natural situation. I have no hesitation in saying that, in the manner I have described, the operation of applying a ligature on the aorta might be accomplished without the least difficulty. I could as easily have done it on the aorta as on the common iliac artery: it was only necessary to have gone an inch higher. If at some future period it is necessary to pass a ligature round the aorta it ought to be performed in this way.

But this operation will lead to another important result, I believe it will prove that it will never be necessary again to put a ligature upon the aorta. It has been twice attempted, and in both cases the patients lost their lives, just as they would have done if the operation had not been performed. If you examine the parts in the dead body, you will find that you can only apply a ligature three quarters of an inch from the termination of the iliac on one side, that it requires little knowledge to pass one over the iliac artery of the opposite side; so that when an aneurism has formed, and you cannot tie the iliac artery of the side in which the disease is situated, you may be enabled to do it in the way I did this operation, from the opposite side, and then it will not be necessary to tie the great trunk of the aorta at all. That is one of the most important results which, I think, may be deduced from the operation I have described.

Perhaps the most extraordinary part of the history of this case is yet to come. The patient suffered little or nothing from it; she was put to bed after the operation, which was performed on the Saturday, and there was no augmentation of the pulse till Sunday evening, when it arose to 120°, attended with pain; but the latter was materially diminished, though not altogether removed, by the abstraction of fourteen ounces of blood. At eleven o'clock at night, I left directions with Mr. Hancock, in case of a return of pain and increase of the pulse, that the bleeding should be repeated; and at four in the morning he took fourteen ounces more, making twenty-

eight ounces altogether on the second morning after the operation. She had not a bad symptom afterwards. I took care not to have her bowels moved for the first four days, and then they were gently opened by the exhibition of an enema of sulphate of magnesia, which was no inconvenience to her whatever.

The temperature of the limb after the operation diminished, but not much, and I attribute it to a method, which I adopted on the former occasion, and which I shall adopt in every instance in which I may again have to perform the operation. It was that of having two persons constantly with her day and night to rub the limb, and a hot brick, or hot bottles of water, together with flannel, were applied to the feet, of the temperature of from 120° to 140°; one rubbed the lower part of the limb, and the other the upper, and they did this continually for three days and nights. I believe it was by this means that the circulation of the limb was in a great measure preserved. The friction was very slight, so as not to injure the cuticle. If an interval of a few minutes elapsed, a hot towel was put upon the limb. The patient occasionally dozed a little, but the same gentle friction was kept up the whole time.

She had not afterwards a bad symptom, and on the 19th of September, the ligature came away. You will observe it was a small thread ligature, and the noose was tied remarkably tight.

Another point deserving of great attention is that the tumour decreased afterwards; the next morning it became much flatter, it rapidly diminished in size, it became softer in every direction, and at the end of a month it was diminished one half; she could then turn over and lie on her back, and also on her side, so that there was fair reason to believe it was being absorbed, as is the case in aneurism, and every body looked forward to ultimate success. The Chevalier de Graêfe saw the patient about this time, and was satisfied it was going on well, and that the tumour would ultimately disappear. The only observation he made was this, that instead of rubbing, as I had done, he should have applied cold water. He thought the best way to prevent mortification in such a case was to apply cold instead of warmth. You may thus perceive the difference of opinion, and whenever you perform a similar operation, adopt whichever plan seems to you most proper.

The wound healed in the course of a couple of months, except at one part, and was no longer a source of inconvenience. The tumour was only half its original size by the middle of December, but her health was bad, and she suffered great pain, in consequence of which she was sent to Brompton, where large doses of quinine and morphia removed the pain, and she was afterwards enabled to walk a little, and ride in a carriage to the steamer, in which she embarked for Scotland.

Here she again changed for the worse; she suffered considerably from pain, and the tumour began again to increase; she lingered on till the 30th of April, when she sunk exhausted.

At my earnest entreaty, the husband, though much against his wish, consented to have the body examined; and a gentleman in Scotland, with whom I corresponded on the subject, performed it, and transmitted a very voluminous report, of which I shall give you the heads only. My opinion was, that it was a malignant disease accompanying an aneurismal tumour.

The body appeared to be an extraordinary specimen of deformity, rendered more apparent by the extreme emaciation which had taken place. The immense tumour measured from a point midway between the navel and symphysis pubis and trochanter, nineteen inches; and from the middle of the lower ribs to the trochanter, 13 inches, the measurement on the other side from the trochanter to the lower ribs was $10\frac{3}{4}$ inches.

On opening the abdomen, the tumour was found extending up to the kidney, the colon adhering to the peritoneum, probably where it was cut. The tumour, internally, had the appearance of being half organised, and seemed to be genuine fungous hæmatodes; on being cut into, it proved to be composed of a substance of cerebriform character. The surface of the skin was of a natural colour.

The arteries were quite healthy, but there was an evident difference in the length of the two common iliacs, to the extent of three-eighths of an inch. The ligature was applied exactly in the centre, where you see the slight depression: the artery was obliterated at that spot, but both above and below its canal was pervious, so that the vessel was divided, and its cut edges united by the first intention, with diminishing of the calibre of the vessel up to the next collateral branch, as it is supposed always to do. The right internal iliac was large, and the right external as large as the vessels of the opposite side, so that the circulation must have been completely re-established. The epigastric and circumflex ilii arteries were much enlarged, and were considered to be the vessels by which the circulation was carried on.

We had, then, in this case, a large tumour, as large as an aneurism, pulsating synchronously with the heart, having the peculiar whiz of a tumour of that description, and which yet proved not to be one. Now it is very evident that a mistake was made, but I regret that I cannot point out any diagnostic signs by which we may be enabled to ascertain the nature of such a tumour in future. It is true that nothing might have been done, but the next case may be aneurism. Sir Astley Cooper had a patient under similar circumstances, who refused to submit to an operation, and went into the country. The aneurism burst into the bladder, and the man bled to death. We must therefore either let

a patient die, as this man did, when, if it be an aneurism, an operation might be successful, as it has been already, or we must sometimes operate even when the case is doubtful. It is much to be regretted that there is no sign or symptom known at present, by which we could clearly diagnosticate; a grooved needle certainly might be passed into the disease, and thus allow of the escape of some medullary matter. I may also add, that the disease affected the bones alone, the head of the femur being in the very middle of the tumour.

Attempts have been made by a great many parties, as I am informed, to obtain possession of a drawing of the parts, with the intention of publishing this case. Now, if this has been done under the supposition that I would not publish it, all I can say is, that they know very little of me. It is true, there has been a mistake, but I should not hesitate on that ground to communicate what might be of advantage to the profession. I believe there is but one right course, that of determined honesty and truth. In fact, it was by my express wish, that the husband consented to an examination, and had I, even in the most indirect manner, shown a desire to the contrary, it would not have taken place.

I have done more, I have had the drawings lithographed at my own expense, by Hullmandel; I have had two hundred copies struck off for my own use, and the proprietors of any journal, whether weekly or monthly, may have copies if they choose to pay for them.

EXPLANATION OF THE PLATES*.

Plate 1.

This plate exhibits a front view of the tumour and vessels. The tumour is broken up where it is in relation with the internal iliac, and the rest of it is covered by its sac, probably formed here by the iliac fascia.

A. Aorta.
B. Vena cava.
C. Left common iliac.
D. Left internal iliac.
E. Left external iliac.
F. Right internal iliac.
G. Right external iliac.
H. Right common iliac vein.
I. Left common iliac vein.
K. Right external iliac vein.
a. Right common iliac artery obliterated, the obliteration commencing at *b*, and ending at *c*.
d. The place where the ligature was applied.
e. Gluteal artery.
f. Additional gluteal branch.
g. Sciatic artery.
h. Pudic artery.
i. Obturator artery.
k. Epigastric artery.
l. Circumflexa ilii artery.
m, *n*, *o*. Tumour.
p. Psoas muscle.

Plate 2.

Back view, showing a section of the tumour.

A. Aorta.
B. Inferior cava.
C. Psoas muscle.
D. Left common iliac artery.
E. Right common iliac artery.
f. Gluteal artery, cut.
g. Sciatic artery.
h. Pudic artery.
k. Portion of the great sciatic nerve free from disease.

SELECTIONS
FROM THE LECTURES OF MM. BLANCHET AND SELL,
ON THE COMPOSITION OF ORGANIC SUBSTANCES.

Oleum Anisi, or Oil of Aniseed, is contained particularly in the seeds of the *pimpinella anisum*: it is composed of two oils — one stéaroptène †, and the other éléoptène ‡. The first is dissolved in the second at × 17°: its weight increases to a fourth of that of the oil. All the oils of aniseed do not deposit stéaroptène; we find some perfectly pure, which remain liquid under all circumstances. Those which contain stéaroptène deposit it at × 10°. The oil of aniseed, like all other volatile oils,

* We regret that, from circumstances over which we have no control, we are unable to furnish our readers this week with the plates illustrative of the preceding lecture. They will be given with the next number of this Journal.—Eds.

† Stéaropton.—Herberger gave this name to the concrete and crystalline portions of volatile oils.

‡ Elæoptena.—Name given by Berzelius to that portion of volatile oils which remain liquid below the ordinary temperature.

absorbs air, increases in weight, and becomes thicker; its specific gravity is according to

Saussure at 25° . .	0·9857
Martius	0·9853 old oil.
Idem	0·979 fresh.
Tremlich at 17° . .	0·991
Chardin at 25° . .	1·075.

Its specific gravity varies, then, according to its age, and according to the quality of stéaroptène which it contains.

Analysis—0·4925 of matter have given us 1·449 of carbonic acid and 0·379 of water.

The composition of the oil, calculated from this analysis, will be

Carbon . . .	81·35
Hydrogen . .	8 55
Oxygen . . .	10·10
	100 00

The oil which we used was the ordinary oil of aniseed, of a yellow colour, and contained a great quantity of stéaroptène; the water which it contained was extracted by the chloride of lime.

Stéaroptène from the Oil of Aniseed.

This can be separated from the éléoptène by passing it through filtering paper at a temperature of 0°. This process will not, however, furnish a product sufficiently pure to be submitted to analysis, and it is for this reason that we have not followed this method.

The stéaroptène, deprived of éléoptène by the proceeding we have described, has been dissolved in alcohol at 90°. By cooling, it crystallises in large brilliant scales, which may be collected on a filter, and dried between paper. By liquefying the stéaroptène thus obtained, we deprive it of its adherent alcohol. Stéaroptène, perfectly pure, crystallises in sandy pearls; it is more ponderous than water; dissolves at 16°; boils at 220° without being decomposed; it is more volatile than éléoptène, but dissolves with less facility in alcohol. Stéaroptène, when solid, is not decomposed by air: in a state of fluid it is acted on similarly to oil.

Analysis.—0·443 of matter have produced 1·311 of carbonic acid, and 0·324 of water.

Its composition, calculated from this analysis, would be

Carbon . . .	81·21
Hydrogen . .	8·12
Oxygen . . .	10 67
	100 00

From this analysis corresponds the following formula:—

		Calculated compos.	
5 atoms of carbon	3·8215	carbon	81·39
6 ——— hydrogen	0·3738	hydrogen	7·96
½ ——— oxygen	0 5000	oxygen	10·64
			99·99

Saussure and Dumas have found the following composition in the stéaroptène from the oil of aniseed:—

	SAUSSURE.	DUMAS.
Carbon . .	83·47	81.35
Hydrogen .	7·53	8·26
Oxygen .	8·54	10·39
Azote . .	0·46	
	100·00	100·00

Oil of Fennel.

The specific gravity of this oil is, according to

Martius . .	0·9853
Lecois . .	0·997
Chardin at 25	0.896

This oil is very analogous to the oil of aniseed; both deposit stéaroptène at 10°, and their specific weights are nearly the same.

Composition—Carbon	77·19
Hydrogen	8.49
Oxygen	14·32
	100·00

According to Goebel, the oil of fennel is composed of

Carbon . . .	75·4
Hydrogen . .	10 0
Oxygen . . .	14·6
	100·0

Stéaroptène from the Oil of Fennel.

	Analysis 1.	Analysis 2.
Composition—Carbon	80·72	81·19
Hydrogen	8·09	8·24
Oxygen	11·19	10 57

The formula found by this analysis is

		Calculated compos.	
5 atoms of carbon	3·8215	carbon	81·39
6 ——— hydrogen	0·3738	hydrogen	7·96
½ ——— oxygen	0·5000	oxygen	10·64
			99·99

By comparing the analysis of stéaroptène from the oil of aniseed with that of stéaroptène from the oil of fennel, not the least doubt can be entertained as to their identity. The difference of the two oils should be attributed to the diversity of their éléoptènes; their stéaroptènes dissolve, and enter into ebullition at the same temperature, and they present exactly the same composition.

Oil of Peppermint.

In the whole of the plant of the mentha piperita is found a volatile oil, which can be obtained by distillation with water. In commerce, this oil is particularly distinguished by two qualities,—one which is obtained from America, the other which is furnished by France, England, and Germany. The American oil of peppermint deposits a great quantity of stéaroptène: that produced in Germany possesses this property in a much less degree.

Giése states, that the oil which is obtained from the green plant, before it blooms, does not deposit stéaroptène; but if the plant is gathered and dried during its blossom, it produces, by distillation with water, an oil which deposits stéaroptène.

The specific gravity of the oil of peppermint is, according to

Martius . .	0·9098	from an oil prepared by him and not rectified.
Idem . . .	0·9024	rectified oil.
Chardin at 18°	0·9068	English oil.
Idem at 25° .	0·917	French oil.

The oil which we have analysed has recently been prepared by M. Nieper, of Heidelberg; we have kept it in contact with the chloride of lime for many days, in order to deprive it of all its water.

	Analysis 1.	Analysis 2.
Composition—carbon	79·63	79·53
hydrogen	11·25	10 77
oxygen	9·12	9·70
	100·00	100·00

The two analyses give the same atomistic formula, viz —

		Calculated analysis.	
6 atoms of carbon	4 5858	carbon	80·32
10 ——— hydrogen	0 6230	hydrogen	10·91
½ ——— oxygen	0 5000	oxygen	8·76
			99·99

According to Goebel, the oil of peppermint is composed of

Carbon . .	75·1
Hydrogen . .	13·4
Oxygen . .	11·5
	100·0

Stéaroptène from the Oil of Peppermint.

The American oil of peppermint deposits a portion of its stéaroptène when cooling. The stéaroptène crystallises in scales, liquefies at × 27°, and boils at × 208°; but, if left in contact with air at this temperature, it becomes of a light yellowish hue, and only coagulates at × 24°. In close vessels it can be distilled without alteration, and forms, from this process, after it has parted with its caloric, a white, brittle, crystalline, firm mass. The stéaroptène obtained from this oil neither crystallises in alcohol, nor in a mixture with alcohol and æther. Poust regards this stéaroptène, as well as the stéaroptène in general from the labiated plants, identical with common camphor.

The stéaroptène submitted to analysis has been purified by distillation.

	Analysis 1.	Analysis 2.
Carbon . . .	79·63	77·27
Hydrogen . .	11·25	12 96
Oxygen . .	9·12	9·77
	100·00	100·00

The atomistic formula calculated from these analyses is

		Calculated analysis.	
5 atoms of carbon	3·8215	carbon	77·28
10 ——— hydrogen	0·6230	hydrogen	12·59
½ ——— oxygen	0·5000	oxygen	10·12
			99·99

From this analysis, considering the chemical composition of stéaroptène, it cannot be identical with common camphor.

According to Dumas, stéaroptène from the oil of peppermint is composed of

Carbon . .	77·61
Hydrogen .	13·09
Oxygen . .	9·30
	100·00

Oil of the Asarum Europæum.

Composition—carbon .	75·41
hydrogen .	9·76
oxygen . .	14 86
	100·00

Camphor from the Asarum (Hyd. Oil of Asarum).

This substance was described in the first place by Goertz, and more recently by Lassaigne and Feneulle; but it is to M. Gracger that we are indebted for the most important researches on the camphor asarum. He has published the results of his experiments in a dissertation we are about to extract, and which are much more important than any that have as yet been published.

M. Gracger has extracted two crystalline substances from the roots of the asarum Europæum, one of which has already been known by the name of camphor asarum; the other, it is true, resembles the first, but it is distinguished from it by its crystalline form, and by many other characters, especially by the manner in which it combines with acids, and has received the name of *asarite*. The root, distilled with water, furnishes a milky solution with an aromatic odour and acid taste. On the surface of the liquid we observe yellow drops, which by degrees form a crystalline scaly mass. After being separated from the water by means of filtration, these crystals can be dissolved by alcohol, and precipitated from this solution by water; they then form a white brilliant mass, which floats in the liquid, whilst a yellowish milky matter is deposited at the bottom. The latter soon takes the appearance of the *manna tabulata*, and can be separated from the crystals by decantation and filtration. The crystals, dried on filtering paper, present pure *asarite*.

The *asarite* presents itself in small pieces, having the gloss of silk, without smell or taste, with a specific gravity of 0·95 to 56° R.; it liquefies, and forms an oily, colourless fluid. If it is still further heated, it passes into a state

of white vapour, which is a great irritant; at a still higher temperature, it burns with a brilliant flame.

The *asarite* crystals are soluble in alcohol, æther, and volatile oils, but not in water; nitric acid dissolves them, with a disengagement of gas in producing oxalic acid; sulphuric acid also dissolves them with a disengagement of gas; but if this dissolution is lengthened by water, they separate from it without alteration. If the temperature of the sulphuric acid is raised, the *asarite* dissolves with a brown colour, without which the dissolution precipitates by water. The liquor by degrees appears blue; diluted with a greater quantity of water it becomes the colour of red wine. After having passed to a violet hue, it deposits ulmine. M. Gracger presumes that it forms a combination of hydrogen, carbon, and sulphuric acid, analogous to the sulphovinic, or sulphonaphtalic acid.

The camphor asarum is distinguished from *asarite* by the following properties; it volatilises without a residue, by disengaging vapours of a powerful irritant nature; water precipitates it from alcoholic solution in cubes and six sided prisms; it dissolves but slowly in nitric acid, and without disengaging gas. The dissolution contains oxalic acid. With concentrated sulphuric acid, the camphor forms a reddish brown dissolution, and by water a brown resin is precipitated from it. The dissolution contains a small portion of tannin, by the effect of heat it becomes neither blue nor green, but of a red brown. After having been liquefied, it presents a striated crystalline mass.

The camphor, that M. Gracger wished to remit to us for analysation, possessed the following properties, it is perfectly white, transparent, and crystallises in six sided prisms. It liquefies at × 40°, congeals at × 27°, and boils at 280°. The thermometer soon rises to × 300°, at which temperature the camphor is decomposed; after cooling it solidifies only at 23°, and does not sublimate.

Composition.		Atoms.
Carbon . .	69·48	8
Hydrogen .	7·78	11
Oxygen .	22·72	2
	99·99	

By comparing the analysis of the oil of asarum with that of camphor, nearly with certitude it may be admitted that the oil is the base of the camphor, and the latter hydrate of oil. The formula for the oil would be C. 8, H. 9°, O, and its composition

Carbon . . .	79·65
Hydrogen . . .	7·22
Oxygen . . .	13·02

Oil of Parsley.

By distilling the seeds of *apium petroselinum* with water, a slightly volatile oil is obtained, and an oil more *lourde*, which contains camphor; the latter is deposited at the bottom of water in prismatic crystals. By distilling even a large quantity of seeds, we have been able to obtain only a small quantity of volatile oil, which we have submitted to experiment.

Camphor from Parsley.

Oil of parsley, recently prepared and put in contact with water, in a few days becomes converted into camphor. By means of filtration, the latter can easily be separated from the water, and dried on filtering paper. Dissolved in alcohol it crystallises in prisms, and liquefies at × 30°. It is a long time again in solidifying, and requires a much lower temperature; at × 21° it boils; at × 300°. it becomes of a brown colour, and does not sublimate.

Anaiysis I.—0·437 of matter produced 1·042 of carbonic acid, and 0·279 of water.

Analysis II.—0·4835 of matter produced 1·139 of carbonic acid, and 0·279 of water.

Its composition calculated from this analysis would be

Carbon .	65·93	65·13
Hydrogen .	6·35	6·41
Oxygen .	27·72	28·46
	100·00	100·00

The atomistic formula, which corresponds to these analyses, would be from

		Calculated analysis.	
6 atoms of carbon	4·5858	carbon	65·30
7 ——— hydrogen	0·4361	hydrogen	6·21
2 ——— oxygen	2·0000	oxygen	28·48
			99·99

Oil of Camphor.

This oil is procured from the laurus camphora. In the trunk of the tree, about fourteen or fifteen feet above the ground, a large notch is made, from which the oil is discharged, and thus collected. The camphor is at first liquid, and becomes solid after being some time exposed to the air. We can easily conceive, then, that the stéaroptène, which is contained in the éléoptène, more volatile, becomes separated, whilst the latter volatilises. The oil of camphor is extracted from the recent plant only in the East Indies; unfortunately we have found it described too imperfectly, and the researches that have been made on this oil are very unsatisfactory.

Common Camphor.

The existence of an organic origin, which forms the base of camphor from many of the volatile oils, and from their combinations, was at first spoken of by M. Dumas, in a note (Ann. de Chimie. et de Phys. tom. 48, page 430). Before then the researches of M. Dumas were unknown; the analysis of camphor, and of camphoric acid by Professor Liébig, and that of artificial camphor from its

basis, and from the oil of turpentine by Dr. Oppermann, had led to the following formula,—

Camphor .	6 (2 c. + 3 h.) + 0
Camphoric acid	5 (2 c. + 3 h.) + 50
Artificial camphor	6 (2 c. + 3 h.) + chl. h.
Oil of ditto .	6 (2 c. + 3 h.)
Oil of turpentine	10 (2 c. + 3 h.) + h. 20.

An inspection of these formulæ suffices to give an idea of organic origin, composed of 2 c. + 3 h., in admitting a slight difference in the quantity of hydrogen, which is scarcely equivalent to incorrect observation. M. Dumas has constructed a formula much more simple, which more accurately corresponds with the composition of camphor and camphoric acid. He gave the name of camphogène to a combination of c. 10 + h. 16. When M. Dumas published his note, he had not made any analysis; his results were only from theoretical conclusions, founded on previous written works, for he still considered the oil of turpentine hypothetically as the hydrate of camphogène, which afterwards he discovered to be incorrect; after this he analysed the oil of turpentine.

Finally, the analysis of camphor excepted, M. Dumas has not published any experiment by which the existence of camphogène, as forming the base of many volatile oils, crystallised or liquid, can be put without all doubt; for his analysis of stéaroptène from aniseed and from peppermint presents different quantities of hydrogen for the composition of camphogène, which appears to us to contradict rather than confirm this invariable origin, in the case in which we supposed that the base of the stéaroptènes could be identified with the hypothetical base of camphor.

It is for this reason that we have repeated the analysis of camphor with every possible precaution, and in order to analyse it we have procured the common camphor of commerce, and chosen a pure piece from the interior of a large mass.

Analysis 1.—0·5775 of matter produced 1·470 of carbonic acid, 0·556 of water.

The composition of camphor calculated from these analyses

	Analysis 1.	Analysis 2.	Analysis 3.
Carbon,	79 95	79·19	78·91
Hydrogen	10 71	10·58	10·51
Oxygen	9.34	10·23	11.58
	100·00	100·00	100·00

The following formulæ correspond to these analyses:

		Calculated analysis.	
10 atoms of carbon	7·6430	carbon	79·28
16 ——— hydrogen	0·9968	hydrogen	10·30
1 ——— oxygen	1·0000	oxygen	10·37
			99·99

These analyses confirm the results obtained by M. Dumas, but they differ 1 per cent. of carbon from the analysis published by Professor Liébig. According to this latter professor we ought to seek the cause of this difference in the apparatus then employed to analyse volatile matters, and those substances containing much carbon; by determining or calculating the proportion of carbon from the volume of carbonic acid, an error is committed which increases the weight of carbon and which increases it much more, the less the quantity of matter is in proportion to the capacity of the apparatus. This difference, however, has no influence on the calculated compositions. It is for this reason that the analysis of the hydrochlorate of dadyl (artificial camphor) of Oppermann, and the analysis of uric acid by Kodeveiss, are found inexact; the cause of this error appears to arise from what the porous deutoxide of copper absorbs, and condenses from the atmospheric air, which, exposed during combustion, increases the volume of the gas obtained.

Reviews.

Life of John Armstrong, M.D., with an Inquiry into Facts connected with Marsh Fever. By F. Boot, M.D. Vol. II.

Dr. Armstrong has early gone to his account, regretted by his particular friends, and by a large circle of professional admirers. The present work is a tribute paid by friendship to his memory, and professes to establish by new, or at least addititional evidence, those particular principles which raised Dr. Armstrong into celebrity while living, and on which his claim to any posthumous fame must now rest; and that Dr. Armstrong did indulge in generous aspiration after future renown is plain from the following passage,—"My name," says this gentleman in his lectures, "amounts almost to nothing; it is a faint sound that has arisen, and which, though it may endure for the present, can descend to no late period, but *will surely be lost in the immensity of history.* But the principles which I have taught being true now, will be equally true hereafter, and will be transmitted when my name has been forgotten, will remain essentially unaffected either by circumstances or time." This rather measureless eulogium of an author upon his own works, would lead us to believe, that Dr. Armstrong had determined the laws which regulate human maladies, at least as demonstrably as Newton has determined the laws and move-

ments of the planetary system. As we have not been able to satisfy ourselves that such is actually the fact, as the exordium invites discussion, and as we are anxious to vindicate posterity from the charge of ingratitude in appropriating his facts but neglecting his name, and ourselves in neglecting to pay homage to the claims of Dr. Armstong, we shall venture to lay before our readers the grounds of our dissent from what he considers to be his particular opinions.

The medical opinions peculiar to Dr. Armstrong are that a limited circle of fevers, as plague, typhus fever, intermittent, remittent and yellow fevers, are but varieties of one and the same disease, that they are all non-contagious and that they are all equally the product of one common cause, namely, of paludal malaria, the difference of mean temperature, of dryness, of moisture, modifying the disease, and determining the character of the fever.

Now, the barber in the Arabian Nights' Entertainments, on going to examine the body of Hunchback, very sagely and philosophically observes, that no man dies without a cause. Every medical philosopher will readily assent to this recondite proposition. Still, who in many diseases will venture to determine the *particular cause?* Syphilis appeared at a determinate time and place, so also did small-pox, measles, scarlet fever, cholera,—yet what do we know about their great primary origin? The causes of disease are among the most hidden, secret, and mysterious of the operations of nature. Science has connected a limited number of diseases with paludal miasmata, and Dr. Armstrong has ventured to link plague and typhus among that number. The one prevailed as extensively and as fatally in the hot and arid sands of Morocco and Arabia, where a well of water is a pearl of great price, as it does in the low paludal grounds of Alexandria and Damietta, the other raging as violently and as commonly in the paved city, and in the mountains of Europe, as in the deltas of any of our most marshy rivers. We will now examine, since the book opens with plague, the grounds for the proposition that that disease has a paludal origin; for be it remembered that Dr. Armstrong undertakes to prove, not that typhus fever and plague are connected with *a* malaria of uncertain origin, but with *some malaria* producing paludal fevers.

Now, if there be any truth in the hypothesis that plague be a paludal disease, the proper evidence for so important a fact would be to show that plague is common to all paludal countries; or, that argument failing, that there were peculiar modifying circumstances in the paludal country which give rise to it, that might localise that fever. It is well known, however, that in all that large portion of the globe which constitutes America, Asia, and all parts of Africa to the south of the equator, countries subject to every variety of temperature, and possessing every possible variety of paludal formation, that plague has never been known to prevail. This line of argument is then altogether untenable, and is not attempted to be supported. It was consequently in the modifying clause that we expected the best powers of the author would be put forth. But in vain have we looked for the learned and abstruse science, the fine philosophy, and the overwhelming proof that should have illumined this dark and difficult part of his work. We will surprise our readers by laying before them all that we can find that relates to the circumstances that concur in modifying the contaminated air of paludal Egypt, so as to produce plague. It is contained in the following quotation from Assalini, —"I was convinced," says Assalini, speaking of the plague at Jaffa, "that it was epidemic, and that if my health became impaired by a concurrence of any causes whatever, I could not escape it, even by the most strict seclusion. As I was persuaded that obstructed perspiration, damp and infected air, the exhalations of marshes, bad food, were the principal causes of the disease, I endeavoured to avoid unhealthy places, damp and cold air, and made use of the best food I could procure; and as I knew the influence of mind in predisposing to disease, I avoided all melancholy ideas by being constantly employed." We are quite willing to pay every tribute to these epicurean resolutions of Assalini, but surely there is little of that philosophy which relates to great primary causes in his precautionary wisdom. The secondary cause he assigns would suit as well for cholera, or small-pox, or any other disease whatever, as well as plague, and the paludal origin of this fever is therefore left by Dr.

Armstrong and by Dr. Boot just where they found it.

It is not by great and direct arguments that it suited these writers to support their hypothesis. They do not reason from the palpable existence of the great cause downwards, but from an accident incident to the disease upwards. Dr. Armstrong contends, that because yellow-fever, a paludal disease, is not contagious, so plague, being non-contagious, is a paludal disease; while Dr. Boot comes to the same conclusion, because plague puts on occasionally an intermittent type. Now, we are quite sure that, when we state that the conclusion to which Dr. Armstrong came is in direct opposition to the recorded opinions of the Medical Staff of both the English and French Armies of Occupation in Egypt, it is opposed to the still later experience of the medical and military officers serving in Malta and other parts of the Mediterranean, our readers will expect some very cogent proofs of the non-contagious nature of the plague. We therefore give all those *gisty* facts on which Dr. Armstrong relied for the proof of this proposition.

"A friend of mine, who resided at Constantinople, told me 'he *thought* it was not contagious;' another, 'that the father sleeping with his child who was affected had not the pestis;' another, 'that the child sucking at the breast of its mother labouring under pestis was not affected;' another, 'that it prevailed in solitary places.' Moreover," he adds, "we have also the opinion of a distinguished individual who is now numbered with the dead — I mean Bonaparte—who was one of the most accurate observers of nature *in his day*. He believed that it arose from exhalations from the surface of the earth."

Such is the irrefragable evidence—and all the evidence—by which Dr. Armstrong convinces himself; for, we think it can convince no one else, that plague is not contagious!! and that in face of many direct experiments by way of involution—of the immense mortality among the attendants of the sick when unprotected by oil-skins—of the practice of shutting up—and the still more onerous but successful practice of isolating towns and villages—precautions that are readily submitted to by the inhabitants of countries where the plague rages, as the only but sure means of counteracting its subtle contagion and terminating the disease. We cannot help, therefore, apprehending, that when Bonaparte played the charlatan to prevent his desponding army from disbanding, a smile must have played on his lip had he imagined that he was practising not less on his soldiers than on the doctors. The delicate compliment, also, that Dr. Armstrong pays that great man, that "he was one of the most accurate observers of nature in his day," is perhaps the only piece of flattery that was not paid to his imperial power. Bonaparte was indeed a keen observer of human nature, but of nature in the sense here meant he was profoundly ignorant. La Place and Cuvier found no kindred mind in Bonaparte.

Dr. Boot takes a different view of the subject from his master; he attempts to prove that plague is a non-contagious disease, and therefore paludal, quoting a variety of authors of the olden time—of from one to very nearly two hundred years old—and also by showing that plague occasionally assumes an intermittent and a remittent form. It will be plain, however, that every disease in which large collections of matter form must be more or less intermittent or remittent; and we might as well, on such ground, assume that phthisis is a paludal disease. As the name of Sydenham stands among the most prominent of these authorities for non-contagion, we beg leave to add, that, with every veneration for Sydenham as one of the most enlightened fathers of English medicine, a more inconclusive authority could not have been referred to; for we think it can be fairly proved from his works, that the science he professed did not enable him to refer paludal fevers to any assignable source. The work of Lancisi had not then appeared, and he was entirely ignorant that there was the remotest connection between marshes and any particular fever. It is difficult to understand how a fact so well known to Hippocrates and Galen could have been lost sight of; but Dr. Armstrong explains it in this instance, by telling us that Sydenham was not a learned man. The impression on our mind also is, that Sydenham was even ignorant of the contagious nature of small-pox.

Dr. Armstrong is not content with giving us a hypothetical account of plague — he is obliging enough to indicate its mode of cure.

St. John Long, before cholera appeared in this country, offered to the East India Company the secret of his universal remedy, which he affirmed would be found to be an infallible specific for it. But he stipulated, in return, for a large and valuable remuneration. Dr. Armstrong is more generous; he tells us we have only to adopt his theory of excitement and of congestion, and the therapeutical doctrine he has founded on it, namely, depletion, and we shall obtain such an amount of success, that the charge of empiricism shall be no longer deserved on this subject. The only misfortune attending this recommendation is, that the plan has been most freely and fairly tried and has failed. Frederick the Great once asked one of his generals "how he would act supposing 20,000 men to be arrayed against him." The general modestly replied, "that he should much like to see his enemy before he decided on his plan of operations." We think Dr. Armstrong ought to have seen his enemy before he prescribed.

The next proposition which is attempted to be proved is, that typhus fever is a paludal disease, and therefore not contagious. Now, as this proposition is in direct contradiction to the agreeing experience of all the great hospitals of England, Scotland, Ireland, of Germany, and of many of France, we did expect that this part of the subject would have been treated on the broadest grounds; but, instead of any enlarged views, we are refreshed with such decisive facts as the following:—"I knew two ladies who had typhus fever, who were living in a very airy square."—"I was once looking at a house which I had some thoughts of taking, but a medical man warned me against it, as there was always typhus fever there, and on that account a family had just left it. It was a very airy situation, but malaria prevailed there." After such astounding absurdities as these, can we wonder on Dr. Armstrong mentioning to his friends that he had changed his opinions, and, from being a contagionist, that he had become a non-contagionist, that one shrugged his shoulder, and seemed as if something stuck in his throat; that another cocked his eye and smiled sarcastically, while a third shook his head, and swore the doctrine of contagion was true.

There is one fever which Dr. Armstrong excludes from a paludal origin, namely,—congestive fever. We cannot refrain from saying a few words of this nondescript creation,—not that we understand it, for that is impossible, but we wish to introduce it to our readers as a great curiosity. We will first give the quotation which Dr. Armstrong considered as the best illustration of this fever; and, afterwards, the diseases he classes under this head. The passage is from Shakspeare, and is as follows:

"Oft have I seen a timely-parted *ghost*
Of ashy semblance, meagre, pale, and bloodless,
Being all descended to the labouring heart;
Who, in the conflict that he holds with death,
Attracts the same for aidance 'gainst the enemy,
Which, with the heart, there cools, and ne'er returneth
To blush and beautify the cheek again."

Such is the definition of this pale, bloodless light, nevertheless, blood-congested fever. Now for the cases:—"A person of advanced age walks out on a very cold day, and dies of congestive fever."—"I saw a man who became chilled one morning, and *remained chilly* some time; at length he grasped his head with his *hands*, and suddenly fell down and died. Dissection proved that he died of congestive fever." These cases are unquestionably apoplexy;—the following is cholera:—

"I saw a gentleman one morning who had an attack of the extreme form of congestive fever: he had copious purging and vomiting." In short, he had congestions in the brain, in the lungs, and in the liver, and laboured under an attack of what would be called cholera morbus.

The next is dyspepsia:—

"Just before lecturing one evening, I was called to a young lady who had been out all the morning, and was very cold; and as soon as she returned home she ate a piece of cold apple dumpling, and she had congestive fever."

Such is the *namby pamby* matter of Dr. Armstrong's congestive fever. Among other things he tells us, that by putting our ears—can the gentle reader guess where?—why, to the patient's *mouth*, you may hear a whizzing or purring deep in the bronchial passage.

The treatment, also, of congestive fever, which embraces cases of apoplexy, is not a

little remarkable. We are to give the patient *dry* brandy, or wine, together with from thirty-five to one hundred drops of laudanum. There is another remedy also for this disease, which is derived from the early periods of the Jewish dynasty. King David, being in extremity, was put to bed with a damsel on each side of him; "but no heat came," and he died. Dr. Armstrong tells us that, in a case of profuse uterine hæmorrhage,—a case likewise of congestive fever,—he restored the patient by placing her in bed with a healthy woman on each side of her; thus far surpassing in success the most renowned of Israel's kings.

Dr. Armstrong has always been renowned for his physiology, and we must give one example of it, and then we have done.

"There is no doubt that the muscular power is depending on a subtile something communicated along the nerves. We might illustrate this in some degree by reference to *a candle* or to *a fire*, which if they be not sufficiently supplied with air will not burn brightly. But if the lengthened wick of the candle be removed, and if the charred fire be stirred, so as to expose a fresh surface to the air, then it will burn vividly. The fire becomes dim for want of ventilation, it is charred on its surface and becomes more and more dull, until it at last goes out completely. This is a pretty apt illustration of what takes place in those states of respiration to which I have just alluded. For life really seems to be connected with a species of combustion. It seems necessary that a certain quantity of charcoal should be consumed for the purpose of supporting the functions of life, for unless a proper quantity of arterial blood circulate through the brain and its membranes, the result is a deficiency of the nervous and muscular power. One might almost, *à priori*, suppose that, if this fire were properly fed, it would, like the sacred fire of the Parsees, burn as brightly and immortally, but experience teaches us that, when once it is extinguished,

> 'We know not where is that Promethean heat
> Which can its light return.'

"The probability is that there is yet some important discovery to be made with reference to the nervous system, for there is unquestionably a subtile something, *a tertium quid*, the result of some mysterious change with which we are at present unacquainted. In chemistry two substances of directly opposite nature and character being brought into contact, a new compound is formed different entirely from the characters of either of them. There is an example of this in glass. There seems something analogous to it in music. We have a flute, and a person who plays it, the result is music, which is unlike either of the original component parts. So I believe that, by some very mysterious function of life, there is produced, from the contact of arterial blood with nervous matter, a certain ultimate result, a *tertium quid*, entirely differing, that is, from either nervous matter or arterial blood." We have given the above quotation as a fair specimen of Dr. Armstrong's powers of reasoning, powers of illustration, and mode of lecturing. The hypothesis is common-place enough, but is put as a mystery; there is no connection between the subtile something, and the illustration which follows. Shakespeare compared life to a "brief candle." Dr. Armstrong has compared the action of the nervous on the muscular system, to a snuffed candle; where is the resemblance? Most physiologists have considered that the nerves do exert some agency, or secrete some fluid; to have simply stated this opinion would have been unoratorical, therefore glass is a *tertium quid*, music is a *tertium quid*, and the nervous fluid is turned into that "important discovery," a *tertium quid* also.

We have, in a former number, paid a high acknowledgment to the successful fortunes of Dr. Armstrong, and pointed out the almost insuperable difficulties which the discordant state of the profession enabled him to overcome. In the present one, it has been our duty to estimate how far his genius and his talents contributed to render those fortunes prosperous, or that renown, which he seems so confidently to have anticipated, permanent. Now if we have held the scales of justice impartially, if we have fairly displayed the mind of Dr. Armstrong to the reader, we can only say that if genius consists of patient observation of facts, of felicitous analysis, and in logical induction, not one particle of genius can we find in the writings of Dr. Armstrong; and the bays, which he hoped to wear, are withered and

blighted in his grasp; they never can adorn his brow. Neither can his name nor his books go down to posterity. Between genius and talent there is a wide difference; the former is the attribute, in general, of men of humble and retired bearing; and such men, though the most deserving, are seldom the most successful in life. The man of talent, on the other hand, is bold, active, playing with men's minds, and turning them to his own account, and these men generally carry off the greater prides of life. It is impossible to deny that Dr. Armstrong possessed considerable talent in the sense we have defined it, though that talent is not of a high order. Sterling science he did not possess, and probably the late period of life at which he entered the profession disqualified him from attaining it; but what he was deficient in matter, he made up in manner. He was an excellent actor, and his address in the lecture room was effective and impressive, and the first time we heard him, although he delivered doctrines that made us shudder, and which he afterwards changed, we prognosticated that his debut was a "*hit.*" He suited, it would appear (after the *exposé* we have given), his lectures to the humblest capacities of his class; he kept their attention alive by decrying all preceding science, by astounding novelty of opinion, by occasional outbreaks of embittered and jealous feelings against all that was or had been of established repute in the profession. These bursts occasionally rose into rude, not lofty eloquence. For he more delighted in gaudy and glittering ornament, in bright colouring, and in strong and fierce displays of passion, than in the simplicity of science, in its calm but not unpolished diction, and in the deep, but moderated and subdued feelings, which should accompany its pursuit.

Having thus expressed our opinions of Dr. Armstrong, we have nothing further to add respecting the present volume, than that we found it to be a most unreadable book, and we fear it will not repay the author the labour and expense it must have cost him to produce it.

On the certainty and safety with which the Operation for the extraction of a Cataract from the Human Eye may be performed, and on the Means by which it is to be accomplished. By G. J. Guthrie, Esq. F.R.S., Surgeon to the Westminster Hospital, and to the Royal Westminster Ophthalmic Hospital, &c. &c. *With Remarks, by* Capt. Kater, F.R.S., *on certain Spots discoverable in the Human Eye, and on the manner of detecting their Situation.* Published for the benefit of the Royal Westminster Ophthalmic Hospital. Sams, St. James's-street. Pp. 47.

The author of this brochure is already well known as a talented and scientific surgeon, and also as a first-rate oculist. He has been the only surgeon to the Royal Westminster Ophthalmic Hospital for many years, and we hail with pleasure this, "*The First Special Report on Particular Diseases and Operations*" from that Institution. We hope we are to consider it as the precursor of many others, for which we know, from personal experience, there are ample means within the walls of that hospital. That much practical good and knowledge have been derived from that establishment, those young surgeons who have acquired their ophthalmic lore there, and those other members of the profession who have had occasion to try the remedial agents which come recommended to us by the weight of experience which is there accumulated, will never attempt to gainsay. Our public hospitals will never be able to afford a sufficient field of inquiry and observation for the trials of those new remedies which are from time to time brought forward as likely to prove beneficial in ophthalmic complaints, because cases of diseases of the eye rarely occur in them, at least, comparatively speaking; whereas, in institutions such as these, devoted to the relief of the disorders and diseases of a certain organ, experiments can be tried on a large scale, and in the only way in which experiments on the use of medicines should be tried, namely, by contrasting their effects with those of other medicines. Need we call to recollection the various new remedies which this Institution has either been the means of introducing as valuable agents in the treatment of disease, or has proved to have negative or positively injurious powers? Need we remind our readers

of the well-known unguent of nitrate of silver, of which a medical friend of ours was lately speaking in these emphatic words—"*it acts like a charm?*" Need we add, that the chloride of lime, as recommended by the Dutch in the purulent ophthalmia, the ol. terebinthinæ in iritis, introduced by Mr. Carmichael, the oleum limonis in acute and chronic inflammations, first used by M. Werlitz of Berlin, the æther preparation of Dr. Seeds, used in the same complaints, and the remedy for cataract of Mr. Marshall, have all been tried in this hospital, long before they were known generally to the profession? We must therefore reiterate our assertion, that much benefit has been derived by the profession from the establishment of this Institution, equal, indeed, to that obtained by those who attend there. As a further proof of the value and importance of this hospital, we may state, that many of the old pupils have become surgeons to ophthalmic institutions in this country and abroad; and we know, at this instant, two, who have gone far towards establishing a very respectable practice, by being enabled to heal and cure complaints of this organ, in which others who had not attended to such practice had failed previously. In one of these instances to which we allude several physicians and surgeons had been in attendance, one after another, and had totally failed; indeed, pronouncing the fiat of blindness, so necessary is it that every one, whether physician, surgeon, or general practitioner, should be thoroughly acquainted with the diseases and treatment of this highly important organ.

To proceed now with our author's work. We may say that we consider it one of great value; the signs laid down for the diagnosis of cataract, and its extraction, are remarkably clear. Formerly, and indeed still, in a great measure, all the operations of the eye were performed by a particular class of men, who, therefore, while pretending to describe the steps of an operation, took care to mystify their proceedings, so that little or no advantage could be derived from perusing their works. It reminds one of the celebrated surgeon and lecturer on surgery, who always refused to explain the operation of lithotomy, as he said it was that by which he got his bread.

The pamphlet under notice has reference simply to the operation for the extraction of a cataract, which ought only to be performed on a hard one. We shall conclude our notice by extracting the description of the operation, premising that Mr. Guthrie is a determined advocate for the application of belladonna previous to the performance of any operation on this organ: he considers that it tends to prevent great embarrassment from the iris. On the question relative to operating on both cataracts, should there be two, he is equally decided. If the surgeon has confidence in himself (and if he has not he should give up the knife), he should do both at once, because there are many patients, especially elderly persons, "who can bear a vigorous treatment *once* well, and recover from it, but they cannot often bear and recover from it *twice*.

"The operation of extraction should always be done, as a general rule, upwards, that is, on the upper half of the cornea, and this regulates the position of the patient and surgeon. The patient should be placed opposite a strong, clear, steady light, without sunshine, and a northern light is the best, although it is not of any consequence what light it is, provided it is unaccompanied by the beams of the sun. He should be seated in an arm-chair, the back of which should be low enough to support the head when gently inclined backwards. A night-cap, fitted exactly to the head, so that it cannot move, should now be put on; the fore-part should be turned up if it comes too low down on the forehead, and the middle of a light, thin, spongy kind of linen bandage, two inches and a half wide, should be pinned or sewed to the centre of it behind, ready for use.

"For the operation on the right eye, the surgeon should place himself behind the patient, and he will usually find it necessary to stand on a stool, in order to raise himself to such a height, that he may readily lean over, and have his hands at perfect ease, and in that position and distance from his own head or chest, which is most convenient to him. The patient's head being a little inclined backwards, and duly, although gently and comfortably, supported by the cushion, or back of the chair, the surgeon, leaning over from behind, brings the two fore-fingers of the left hand over the forehead gently down on the eyelid, and raises it up slowly and tenderly,

so as to fix it ultimately against the upper edge of the orbit, and to be able to retain it there so perfectly, with the end of the fore-finger only, that the patient cannot lower it or close the eyelid by any effort he can make. He should also be able to do this, and to make a a little pressure on the eyeball, in order to fix it at the moment the incision is begun. As soon as the index finger is in this position, the second finger leaves the upper, and lowers the under lid, and fixes it against the edge of the orbit below; the eye is thus completely exposed, and may be almost fixed between the two fingers. To do all this well, requires a certain degree of practice, which is easily acquired." The same manner of proceeding may be adopted with the left eye, or it may be managed from below, of course it must be done quietly and without violence, and no one should presume to operate until he has acquired such tact as will enable him to fix the eye and eyelids without giving pain.

"The eye being thus opened, and the eyelids retained asunder, the eye loses all the extreme sensibility with which it is endowed for its security and preservation in its ordinary state." "The opinion of the exquisite sensibility of the eye has arisen from the pain which is felt on the admission of a small piece of dirt, or a fly between the eyelids; but this occurs from a wise and preservative provision of nature, on account of the insensibility of the eyeball itself. Let the eyelid be raised, and the same piece of dust applied to the surface of the eye, no pain, and scarcely a sensation, will be produced; remove the piece of dirt, turn out the eyelid, and whilst it is retained everted, place the piece of dirt upon it, no greater sensation will be induced than is felt when it is applied to the eyeball. The inference is, that both surfaces, when touched separately, are nearly insensible to this species of irritation. But let the same piece of dirt be put between the eyelid and the eyeball, and the sensation produced is exquisitely painful. To give rise to this sensation it is necessary that the two surfaces should come in contact, and that the foreign body be grasped between them. If this were not the case, an irreparable injury would often occur to the transparent part of the eye before it would be observed; and if the raising of the lid and the separation of the surfaces did not nearly annul sensation, an operation could not be performed for cataract; for who could bear quietly the sensation arising from pushing a needle into the eye, if it were analogous to that arising from a fly or a dry solid substance between the eye and lids?"

If the patient be irritable and nervous, the eye is very likely to be unsteady when touched for the first time, even when the lid is raised; this inconvenience may be obviated by touching the eye several times previous to an operation with a probe, by which it will become gradually accustomed to the stimulus. The knife Mr. Guthrie prefers is spear-pointed, with a blunt back, and as broad as the perfection of the point will admit. It should be of that degree of equal thickness which will admit of its passing through the cornea with the greatest facility, and of its bearing the best possible point and edge. As every thing depends on the fineness of the point, the surgeon should never place utter confidence in the instrument-maker, but try it on the piece of fine leather which accompanies the case of instruments, and through which it should pass without producing any sound; if it caused the least sound it ought not to be used.

"Held between the fore-finger and thumb, with the little finger resting outside the orbit, the surgeon awaits calmly the steadying of the eye, which should be fixed nearly in the centre, the pupil looking directly forwards. The flat part of the cornea knife may now be made to touch the face of the cornea, as the probe did before, in order to ascertain that the patient is totally free from alarm, and that the eye is steady."

The pupil being fully dilated, the surgeon commences his incision by introducing the knife near the junction of the cornea with the sclerotica, but not wounding the latter membrane, as parts of the same kind unite more readily than those of a dissimilar nature. It should also be so much above the plane of the iris, as to pass readily over it, without injuring it. The upper half of the cornea should be completely divided, and indeed rather more than less. The knife should be held flat and carried steadily onwards; and, if the surgeon has the use of his fingers, he will feel when the resistance offered by the cornea is overcome. The inner membrane of the cornea is more dense than the outer one, and it is occa-

sionally difficult to pierce it in completing the incision, and here the value of a fine-pointed instrument is shown. The difficulty in doing this part arises from the escape of the aqueous humour; if this does not take place till the knife has crossed the anterior chamber, but not penetrated the cornea, the operator must not hesitate, but complete the incision, the iris will not be cut by the progressive motion of the knife.

The eye "now moves with, and of course follows, the motions of the knife; and if it has turned inwards, even into the very internal angle, the knife can bring it gently back to its due central position, but not without the loss of the whole of the aqueous humour; and the iris is now seen bulging forwards on the edge of the knife, sometimes even to overlapping it." The young surgeon now becomes alarmed, and fears that the iris must be cut. Some legerdemain trick was formerly recommended to obviate this difficulty, but all that is necessary, is "to raise the eye, or, in other words, to draw it, as it were, out of the orbit, whilst, at the same time, he presses the cornea flat against the blade of the knife." * * * "The effect of an injury to the iris is greatly overrated; and if the operation cannot be completed without, the injury must be committed." Such is the opinion of Mr. Guthrie, a practical oculist; yet, it must be confessed, that wounding the iris would be an awkward accident, to say the least of it, and would tend very much to confuse perhaps even an experienced operator, not so much on account of after danger from the wound, but from the immediate hæmorrhage which would ensue, and obscure the view of the parts concerned in the operation.

"There should not be one, not even the slightest stop, from the moment of entering the knife until the cornea is wholly divided, or at least until the incision is nearly completed." Mr. G. has invented a knife for the division of the cornea, when it has been commenced and not completed, of which the following is a description. It is "one with two blades, the under one of which should be blunt in every part, the upper the usual cutting knife;" *** "the blunt blade raises the cornea, and pushes back the iris, when the cutting blade, which is a sliding one, is to be pushed forwards, so that it may penetrate the cornea, and complete the punctuation; it can afterwards cut its way out, the blunt blade protecting the iris. The knife, with which the cornea is opened, should be rather larger than the double one, so that the latter may enter easily, and in this way the operation may be safely completed, provided the surgeon has, in withdrawing his knife, made the opening in the cornea large enough to admit the double-bladed one." After using each instrument, the upper lid should be allowed to drop, and the patient to rest for a minute, or more, if necessary.

The next thing to be done, is to divide the capsule of the lens, which is done by scratching several times with a hook, the end of which is at right angles, and which is to be introduced between the flap of the cornea and the iris, until it reaches the pupil. When the capsule has been sufficiently scratched, the natural pressure of the muscles will gradually raise the lens, and expel it, if the incision of the cornea be large enough. Inflammation always follows the discharge of a lens by force. If the cornea be not sufficiently incised, the opening must be enlarged, and when the lens is expelled, the lid should be allowed to fall; if the flap of the cornea should be turned downwards, it must be raised, and laid straight by the curette.

It sometimes happens that the vitreous humour rises up instead of the lens, and begins to escape, the latter sinking in the ball of the eye; in this case it must be followed with the hook through the pupil, and extracted, or the organ will be inevitably destroyed. The loss of a portion of the vitreous humour is not of much importance, except that it causes some irregularity of the pupil, and, being viscid, a portion may remain between the cut edges of the cornea, and prevent immediate reunion.

"The last point of importance in the operation is to place the cut edges of the cornea in apposition, and this is to be done most carefully. In many cases, it is best effected by a gentle friction on the lid; in others, the cornea will be required to be placed *in situ* by the end of the curette; but in all it must be done so that this membrane lie flat on the iris, or nearly so, and particularly that part of it which has been cut, the eye being more hollow under the cornea, in consequence of the absence of the lens, and the loss of the

aqueous humour." The eyelid is then to be closed, and retained so by compress and bandage.

For the after treatment, and many interesting points, which we have not room to signalise, we must refer to the work itself, apologising, at the same time, for trespassing beyond our limits, but the paramount importance of our subject must plead our excuse.

A Dictionary of Terms employed by the French, in Anatomy, Physiology, Pathology, Practical Medicine, Surgery, Midwifery, Pharmacy, Medical Zoology, Botany, and Chemistry, with their derivations from the Greek, and Latin; their Synonyms in the Greek, Latin, French, German, and English; Explanations in English, and Illustrations in the Different Languages. By SHIRLEY PALMER, M.D.

Students and practitioners who are desirous of perusing French and German literature, or of recollecting Latin and Greek terms, employed in medical nomenclature, will find the present work, when complete, particularly useful. We are not desirous that students should occupy much time in the study of names; they should be enjoined to study disease, and not trust too much to the former; but since medical literature is so overwhelmed with difficult and obscure terms, Dr. Palmer's work will be considered a valuable addition to our dictionaries. We wish that the quantities of some of the Latin syllables had been marked, since the frequent mistakes made not only by pupils, but also by some physicians to public hospitals, prove how much this part of their education has been neglected. Dr. Palmer has bestowed much labour on his undertaking, and we hope that it will meet with success, in consequence of the professional zeal which he has displayed.

Foreign Medicine.

ACADEMIE DE MEDECINE.

Sitting, July 30th, 1834.

President—M. PROULAY.

New Ligature for Cancerous Tumours of the Tongue.

M. ANDRAL gave a favorable report of a paper by M. Piquaux, on some symptoms of tubercular phthisis, which had not been sufficiently appreciated by authors. After some little discussion, the report and conclusions were adopted.

M. Mirault, surgeon to the hospital of Angers, read a paper on ligature for a cancerous tumour of the tongue, by a particular proceeding.

The subject of this observation was a young woman, 23 years of age, of lymphatic temperament. In January, 1833, a tumour appeared on her tongue, and continued to increase in size. M. Mirault saw the patient on the 2nd of April, the tumour then was about the size of a nut, hard, and occupied the thickness of the tongue, extending back to the left pillar of the soft palate. At times she experienced in the tumour darting pains; the sublingual glands were slightly engorged. Had never been the subject of syphilis.

From the increase of the tumour, the tongue became too large for the mouth, an operation was necessary, for which the two anterior thirds of the tongue were obliged to be raised, in consequence of the fetid suppuration and hæmorrhage. M. Mirault believed the disease to be an encephaloid cancer.

May 17. M. Mirault endeavoured to tie the lingual artery, to check the supply of blood to the tumour, but was unable to discover it, consequently he passed a ligature around the left half of the tongue.

The next day, the patient was placed in a chair, an incision was made on the right side of the hyoid bone, extending from the middle of its great cornu, carried to about six lines from the inferior maxillary bone to the border of the sterno-mastoid muscle: many veins, as well as the lingual artery, were tied. Five days afterwards, decay of the vegetations was evident; a slight hæmorrhage supervened, which was arrested by agaric.

On the 6th of June, he made another incision on the middle region of the neck to the os hyoides, between the genio-hyoid muscles; the tongue was now extended from the mouth, a needle passed through its base, and the right side of the tongue tied. Two months after this operation, the cure was complete, the decayed tumour had disappeared, and the tongue recovered its normal condition.

M. Mirault discussed at some length on the advantages of this ligature, especially of his proceeding, from which he drew the following propositions:—

1st. An ulcerated cancer can be cured without extirpation.

2nd. When the disease advances to the anterior half of the tongue the submental ligature is preferable.

3rd. The submental ligature performed at two different times does not expose to serious sloughing.

4th. It acts by gradually checking the flow of blood, and causes cicatrisation of the ulcer. The same phenomena will be produced if the lingual arteries are tied near to their origin.

5th. It has not been followed by dangerous symptoms.

6th. The patient has been brought thus from a certain death.

M. Mirault observed, that his work was composed of memoirs too long to be read to the Academy. The most important were relative to the dissection of the lingual artery; and he hoped the Academy would appoint a commission to which he might communicate all his researches.

M. Double replied, that the appointment of a commission was contrary to the rules of the Academy, as M. Mirault was only a corresponding member.

M. Velpeau stated, that the operation practised by M. Mirault was not new; it had been performed five or six years ago by M. Cloquet. The patient died, it is true, but the operation was performed above the hyoidean region.

The paper of M. Mirault was sent into a committee for publication.

ACADEMIE DES SCIENCES.

Sitting of the 30th July, 1834.

Human Ovology.

Such is the title of a paper, in which M. Coste principally endeavours to prove that, up to the present day, the human egg has not been studied under the most favourable circumstances, in order to observe the relation which exists between its organisation and the eggs of other vertebrated animals. When we have studied the human egg, he states, it has in general for some time descended into the uterus, where it had undergone transformations, capable of disguising its real analogy, and which at a more anterior epoch might have been easily perceived. Further, as this egg has, in almost every case, been collected in consequence of a miscarriage, it was more or less altered in its form; and when attention has been paid to this circumstance, an accidental condition has been regarded as normal, which has conduced to the discovery of fundamental differences between this egg and those of mammiferæ and birds. In laying open the causes of these errors, I would recognise, continued M. Coste, that the resemblance in their origin is complete; and the differences, which, at a later period, can be signalised in exaggeration or attenuation of general facts, are common to all species.

Fatal Case of Hydrophobia followed from the Bite of a Dog in perfect Health.

BY M. HERMANN STRAHL.

In the month of January, 1833, I was called to visit a victualler who had suddenly been taken ill, and found him in bed with his clothes on; but he complained of no suffering. His pulse was not accelerated; temperature of skin natural; and his tongue looked healthy. However, on repeatedly questioning the patient, he replied that he had experienced difficulty in swallowing, and that his mother had brought him a cup of tea, which he repulsed with horror, assuring her he could not possibly drink it; at the same moment his eyes became fixed, and his countenance presented a wild appearance. I now learnt from his friends, that about five weeks before he had been bitten by a beagle dog; but that the wound which was inflicted on the left hand had speedily cicatrised; and, moreover, the dog had not the least symptom of hydrophobia. I presented to him an apple, which he ate without spasm, and prescribed some infusion of valerian, with opium. At my request the dog was brought to me by his master, who assured me that the dog had always been up to the present moment in a perfect state of health.

In the evening I again visited my patient, and found him in nearly the same state as I had left him. After the greatest persuasion I got him to swallow three spoonfuls of liquid. The next morning I prescribed a large dose of calomel, and took a large quantity of blood from the arm. In the evening of the same day a severe paroxysm of rage ensued. Upon seeing his sister drink a glass of water, he became in a

most horrible fury, broke a looking-glass, and begged his friends to retire from the room, or else he must unavoidably bite them. This accession of rage lasted half an hour, after which he slept tranquilly. At 10 o'clock another paroxysm supervened, in which he made tremendous shrieks, barked like a dog, and broke every thing in the chamber. He grasped at his sisters who were in the room, but they made their escape; he then attacked his mother, knocked her down, and bit her in the cheek. After this act of fury he became calm, and, in about half an hour, some friends entered his room, found him dead, with his head under the bed-clothes. The mother has continued in good health.—*Journal de Hufeland, December*, 1833.

Good Effects of the Extract of Belladonna in the Reduction of Paraphymosis.

BY J. MAZADE, D.M., ANDUSE.

A few days since I was consulted by a man thirty years of age, for a severe paraphymosis. The opening of the prepuce was extremely small, the gland had become uncovered, and he found it impossible to force it to re-enter under its natural envelopment. Not suffering at first any inconvenience, he permitted the gland to remain in this state, and continued his usual employment. The gland soon became tumefied; it much increased in size, and was extremely sensible, in consequence of the strangulation from the prepuce, which formed a tight collar around the neck of the gland; the whole of the penis was painful and tumefied; urine expelled with the greatest difficulty; finally, all symptoms of acute inflammation ensued. I endeavoured to draw forward the prepuce, but all my efforts were useless

I submitted the patient to an antiphlogistic treatment, and applied mercurial frictions, still the acute symptoms continued. Excision I believed my only resource; to this my patient would not submit, and I was obliged to have recourse to some other remedy.

I prescribed half-drachm doses of the extract of belladonna, to be rubbed on the seat of strangulation, as well as on the glans penis. Soon after the third application, the prepuce was less engorged, the tumefaction of the gland decreased, and its appearance became pale, and wrinkled. At the desire of the patient, I did not attempt the reduction, and he continued the application of belladonna.

After two more applications, the reduction was effected with the greatest facility; and all painful symptoms subsided; the tumefaction of the parts entirely disappeared.

In this patient the action of belladonna was evident, and to it the cure must solely be attributed. A single fact, it is true, is not of much value in therapeutics; and I publish this case only, that the use of this drug might be more generally adopted, and in order to give fresh support to the advantageous results said to have been obtained from this medicament in strangulated hernia.—*Gaz. des Hôpitaux.*

Cholera in Paris.

The cholera still continues to rage in Paris; several fresh cases have been admitted in the hospitals. We have seen two in the Hôtel Dieu, under the care of M. Petit, both of which preserved the blueness of skin, and cramps, such as is constantly observed in this epidemic. Reaction has been speedy, and in the course of three days they have become in a state of convalescence. A few cases have also been observed in the clinical wards of M. Chomel at the same hospital, and at the Hôpital Saint Louis, and the greater majority of them have been restored to health.—*Op. Cit.*

Happy Effects of the Extract of Belladonna in the Treatment of Strangulated Hernia.

BY M. H. JOFFRE, D.M., VILLENEUVE-DE-BERG.

B———, of Villeneuve-de-Berg, sent for me on the 15th of last month for strangulated inguinal hernia of the right side, which he said had been in this state for twelve hours. I found him in most excruciating agony; for some hours vomiting had commenced, and his pulse was quick and feeble. The tumour, which was of a considerable size, was hard, and extremely sensible. I endeavoured for some time to reduce it by means of the taxis, but without success. I prescribed baths and general and local bleeding, but the patient, naturally restless and irritable, would not submit to them. Finding that I was obliged to confine my treatment to local applications, I ordered the extract of belladonna, simply diluted with a little water, to be rubbed on the neck of the tumour. In less than an hour and a half the surrounding parts became in such a

state of relaxation as to permit of an easy reduction of the hernia.

The effects of belladonna are not less efficacious in many other diseases. I have employed this remedy in many cases of neuralgia; amongst others, in neuralgic pains of the face, a disease extremely common in this part of the country. Also many spasmodic diseases have subsided to the action of this therapeutical agent.—*Gazette Médicale.*

FRACTURE OF THE OS ILIUM—RUPTURE OF THE BLADDER.

To the Editors of the London Medical and Surgical Journal.

GENTLEMEN,—Should you consider the following case sufficiently interesting to occupy a place in your useful journal, you will do me a great favour by inserting it.

I am, Gentlemen,
Your obedient servant,
W. T. LEIGH.

July 28th. Job Hearne, æt. 37, a strong athletic countryman, driver of a common four wheel waggon, attempted to jump on one of the shafts while the horses were going on, and caught hold of a rail above, in doing which he missed his hold, fell upon his back in the road, and before he could get out of the way, the fore and hind wheel passed successively over the lower part of the abdomen and pelvis; he was immediately removed to the workhouse, where I saw him in a few minutes. He was lying on his back on a bed, countenance pale, anxious; the whole body in profuse perspiration; clammy and cold; pulse about 90; much pain across the abdomen and pelvis; sickness.

On examination found the left ilium fractured to a considerable extent; a slight bruise on the right side, over the anterior inferior spinous process of the ilium; no external wound or other appearance of injury. He was put into bed; to take a little warm brandy and water; fomentations to the abdomen. In an hour Mr. Graham and myself saw him; countenance very anxious; profuse perspiration (it was very hot, thermometer about 76 in the shade); pulse full, quickened; great desire to pass urine; said he had not passed any for two or three hours before the accident; much pain in the lower part of the abdomen on pressure. V.S.B. ad ℥xvj., hirud. xij., abdom. applic.; hydr. sub. ℈v., pulv. opii ℈j., statim, et post horas quatuor haust. purg. Fearing ruptured bladder, I passed a catheter; no urine flowed. The bleeding from the leeches to be encouraged by fomentations, and afterwards a large poultice to the abdomen.

Evening.—Pain a little relieved; very restless; desire to pass urine urgent; bowels not opened; very thirsty; to take thin gruel and toast water; an opiate at night.

29th, 9 A.M. Had passed a restless night; made no water; bowels not relieved; pain in the abdomen less; a broad bandage was passed round the pelvis, and a pillow secured under the hams, which position he found least painful. Ol. ricini, ℥ ss. omni horâ, donec alvus soluta fuerit.

2 P.M. Castor oil produced much sickness; no motion; vomited merely the contents of the stomach. Hydr. subm. ℈v., pulv. opii ℈j., statim, in horas 4 haust. purg.

Evening.—No relief; sickness occasionally; much distension of abdomen; great restlessness; an enema, O iss., brought away some hardened fæces, and afterwards some dark liquid motion; felt some relief; had passed no water; desire to make water not so urgent.

July 30. Another restless night; rather delirious; great thirst; much pain and distension of the abdomen; no motion since the enema; frequent vomiting of dark green fluid during the night; considerable effusion of blood under the skin of the penis, scrotum, and loins; the bandage round the pelvis, causing pain, was loosened. Hydr. subm. ℈ij., Pulv. Opii, ℈ ss., 3tiis horis sumend About 3 P.M. passed a little urine, clear, no high coloured; had a dark coloured motion, not in any quantity; in the evening passed a little more urine; felt somewhat relieved; mind more composed; still considerable distension, though not so much pain; pulse small, rather hard; frequent hiccough. To take an opiate in Mist. Camph. ℥iss.

31st. Very delirious last night; much restlessness; hiccough very distressing; countenance sunk; no motion; distension of the abdomen more felt by the patient, than from external appearance might be expected; urine passed during the night.

3 P.M. After vomiting the liquid food he

had taken, straining violently, he threw up a quantity of dark coloured fluid, exactly resembling that which passed after the enema, after having a decidedly fæcal odour, at first about Oj., altogether perhaps Oiij. After this he became much depressed, the pulse sank, great anxiety; extremities in a cold clammy sweat; abdomen less distended; scarcely any pain; craved for some porter, which was allowed, as also some weak brandy and water; the sickness returned at intervals of two or three hours during the night, and, gradually sinking, he died between 10 and 11. A.M. Aug. 1.

Sectio Cadaveris.—August 2. Removing the abdominal parietes, the intestines generally appeared much injected, about half a pint of fluid tinged with blood escaped, probably urine, though it had no perceptible urinous smell. The transverse arch of the colon was greatly distended with gas, and its vessels much gorged; the lower portion of the ileum was much injected. The posterior part of the fundus of the bladder showed the seat of the injury; there were two lacerations in it, although only one perforated all its coats: the one situated higher, and more anteriorly, appeared to be merely a laceration of its peritoneal coat, arising from a force applied suddenly, when under a state of distension; the other situated more posteriorly and below perforated all the coats, the peritoneal coat being apparently by far more extensively lacerated than the others—the actual opening into the bladder did not exceed the diameter of a crow quill, while the peritoneum was torn and separated at least an inch. There had been considerable inflammation about the rupture, and a quantity of lymph was thrown out round the edges of the orifice, which, uniting itself with one of the convolutions of the ileum, had caused there a sufficient degree of inflammation to pour out a corresponding quantity of lymph, and thus conjointly had formed a barrier quite sufficient to prevent any further effusion of urine into the cavity of the abdomen. The remaining abdominal viscera appeared quite healthy.

The left os innominatum was fractured obliquely, extending from the anterior inferior spinous process of the ilium upwards and backwards to within half an inch of its posterior superior spinous process; the fractured portion was beaten in, and overlapped the sound bone, and, from its extent, caused such a depression externally, as to inform the eye of the nature of the accident almost without further examination; there was no other fracture or external injury, which was most surprising, considering the immense pressure that he must have been subjected to.

There are some points in this case peculiarly interesting to the pathologist; and first, with regard to the vomiting of fæcal matter; from what cause did that proceed? There was no mortification, no stricture, no strangulation, although from the constant singultus and distension it might have been suspected. Was it caused by the first shock on the system in general? Could the displacement of so large a portion of the abdominal muscles on that side (nearly the whole of the crista ilii being separated) have any influence by altering so much the directions and degree of the natural support to the intestines, as it must have done? These are questions that perhaps some of your able correspondents might throw some light upon. Let me also draw attention to the admirable manner in which nature had endeavoured to avert the ill consequences of so serious an accident, by forming such an effectual plug between the lacerated bladder and intestines. This fully accounted for the empty bladder in the first instance, and the power of passing urine after the adhesive inflammation had once commenced, and adds one more illustration to the wonderful expedients that nature is constantly putting in practice for our preservation.

MR. TATHAM ON SUICIDE AFTER COITUS.

To the Editors of the London Medical and Surgical Journal.

Gentlemen,—Observing in your Journal of July 5th an account of the post mortem examination of a female who committed suicide almost immediately after coitus, I was struck with the relation of the case from a close resemblance it bears to one that came under my observation last autumn; this circumstance has induced me to forward you the particulars for publication.

I am, Gentlemen,
Your obedient servant,
Thos. Robt. Tatham.

Huddersfield, July 30th, 1834.

I was sent for by the chief constable of Huddersfield on Sunday morning, Oct. 6th, 1833, to make an examination of the body of Sarah Boothroyd, a stout, well-formed, healthy young woman, who was found drowned the day before in the canal Aspley. Some suspicion was excited in the neighbourhood that she had come to her death by unfair means, having been observed walking the previous night in the vicinity of the canal in company with a young man of this town, who was afterwards taken into custody. Thinking it possible the affair might terminate in his conviction, I availed myself of the assistance of Mr. Robinson, Surgeon to the Huddersfield Infirmary, in making the autopsy. The inquest was held by Michael Stocks, Esq. Coroner, from Halifax. No evidence appearing to criminate the prisoner he was liberated.

The external appearances of the body showed no marks of violence, neither was there any external symptoms of pregnancy. Breasts natural, areola light coloured. On unfolding the labia pudendi and inspecting the vagina, we found a recent laceration of the hymen; the edges were jagged, and had all the appearances of being very recently ruptured. Within the vagina a little bloody water was retained, which exhibited nothing further remarkable; her chemise was stained with blood both before and behind. The thoracic and abdominal viscera were healthy; the uterus and its appendages no longer than those of a virgin, but they appeared more vascular than usual; the ovaries and broad ligaments participated in this state. I cannot say there was any contraction of these ligaments drawing the ovaries nearer to the uterus: it certainly does not now exist in the preparation by me, having brought away the parts. The left fallopian tube contained a creamy fluid resembling the thicker part of the semen, which was very abundant; no peculiar odour was observable: it might be obscured by the smell of flesh; the canal seemed to be contracted in one part, and offered a little obstruction to passing a probe; when laid open to each extremity it presented to us the appearance of an ovum half way in its passage to the uterus. Both fallopian tubes were very vascular, of a vivid red colour, the fimbriated margins slightly curled inwards. The right tube was empty. The uterus contained a thick mucus, seemingly made up of this creamy fluid tinged with blood; its mucous membrane was highly reddened, but not of such an arterial hue. The left ovarium showed two well-marked recently formed corpora lutea, and some other ova prominent on its surface.

THE

London Medical and Surgical Journal.

Saturday, August 23, 1834.

ADVERTISEMENT.

The Proprietors of the *London Medical and Surgical Journal* beg to inform the Medical Profession, that Dr. Ryan has voluntarily retired from the conduct and management of that work, and has therefore ceased to be any longer responsible for what may hereafter appear in it.

As Dr. Ryan is a member of the medical profession, and the other proprietors of this Journal in the very humble rank of booksellers and publishers, they consider that some explanation is due to the Profession of which Dr. Ryan is a member, as to the facts and circumstances which attended the retirement of Dr. Ryan, lest it should be supposed to be occasioned by their solicitation, or brought about by any misconduct on their part towards him. They utterly deny both; they disclaim any feelings of hostility towards Dr. Ryan, and indeed would have been glad, had he spared them the pain, trouble, and expense, which his very unexpected secession has necessarily occasioned them. It must be most obvious that the copyright of a periodical publication cannot be made of value to its owners, unless they can agree amongst themselves as to the mode in which the work shall be conducted, by whom, how, the accounts shall be kept, and the time when the expences of carrying on the publication shall be paid, the profits accruing from its sale divided, and especially how matter should be obtained for insertion, and gentlemen engaged to contribute to its pages.

All these things were, therefore, agreed on by Dr. Ryan and the other proprietors of this Journal, and the terms were reduced to a contract between them, which was executed by all parties, and dated the 12th day of April,

1833, and the whole was subject to a clause, of which the following is a copy:—

"That if any of the said parties shall at any time hereafter be desirous of determining the said joint publication, and of such, his, or their desire, shall give to the others, or other of them, one calendar month's notice in writing; then, and in such case, at the expiration of the said period of one calendar month, all the agreements herein contained shall, so far as the same relate to the future continuance of the said Journal, cease and determine."

Under this instrument Dr. Ryan was constituted Editor of this Journal, and Mr. Renshaw was named as the Agent and Publisher; and it continued, unaltered, to regulate the publication of the work from the day of its date until the 15th August instant, when the contract was put an end to by Dr. Ryan, in the manner about to be stated. In the early part of the present year, one of the proprietors made some complaint to Dr. Ryan on the subject of the contents of the Journal, to which, although he at first refused to listen, he subsequently gave way, and conceded all that was deemed essential to the interests of the Journal to insist on. Whilst steps were taking to carry what was then determined on (and which is not more particularly stated here out of delicacy to Dr. Ryan) into effect, Dr. Ryan sent to the Proprietor the letter of which the following is a copy:—

"I hereby give you notice, according to our deed of partnership, that I shall withdraw from, and terminate our partnership in, the London Medical and Surgical Journal, in one calendar month from this date.

"Dated, July 15, 1834.

(Signed) "M. Ryan, M.D."

This letter operated as a notice under the clause in the instrument before alluded to, and its effect was, as the proprietors are advised simply, on its expiration on the 15th August inst., to dissolve that contract, and to place each party in the same situation relatively to this Journal as he stood before its execution.

Left in this situation by the withdrawal of Dr. Ryan from the management of the Journal, it became a matter of grave consideration to the proprietors in what manner they ought to proceed. Were they to abandon the Journal altogether, and permit their property to be destroyed and the money already expended upon it to be thrown away, owing to what they must consider Dr. Ryan's caprice; or were they to take the matter up where it stood before the dissolved contract was entered into, and treating Dr. Ryan as an Editor only, and one, therefore, having no further interest in the publication, proceed to engage another gentleman to supply his place, and to continue to publish the work in the usual manner? After due consideration they adopted the latter course; and they must beg the medical profession will view the matter in the same light they have done, and hold them acquitted of any just ground of complaint by Dr. Ryan against them. They have anxiously endeavoured to do ample justice to Dr. Ryan, and are, and have been, at all times desirous to extend to him all the consideration to which his rank in the profession entitles him. But they conceive they were not on that account bound to sacrifice their property; and that the more especially as Dr. Ryan has betrayed an intention to interfere with their copyright, and to withdraw their subscribers from them.

With these feelings, and under these circumstances, they entered on the task of forming such new arrangements for the management and publication of the *London Medical and Surgical Journal*, as Dr. Ryan's retirement made necessary; and they hope and believe they have completed them in such a manner as will give entire satisfaction to their subscribers, and ensure a continuance of their favours.

Of Dr. Ryan's motives for thus withdrawing himself from this Journal, the Proprietors will not venture to speak; whatsoever they may be, they will be discovered by his proceedings, and they are therefore best left to the judgment of his cotemporaries and the proper estimation they will then receive.

SELF-SUPPORTING DISPENSARIES.

We have been favoured with several printed reports on the condition and prospects of the self-supporting dispensaries established in the several towns of Wellesbourne, Coventry, Southam, and Chesham,

together with a number of pamphlets containing observations on the principle of these establishments, and their tendency to promote the health, comfort, and welfare of that important branch of society, —the labouring poor. We are free to confess, the perusal of these papers has afforded us heartfelt satisfaction, not alone because they talk of the success that has attended the institution of these several dispensaries, and the warrant so held out that similar success must attend the like plan, when adopted in other places; nor simply because of the vast amount of human misery and suffering that they have been the means, under Providence, of mitigating or removing, but because it is pleasant to see that the spirit of love, of charity, of benevolence is still amongst us, that the desire "to draw out the soul to the hungry, and satisfy the afflicted souls," yet remains a prominent feature in the English character, a living active principle of the heart. It tells us, in words that deceive not, that the cold and calculating theory on which the new Poor Law Amendment Bill is founded, finds no responsive chord in the great mass of the people of England, although it has been sanctioned by the voice of a reformed (*proh pudor*) legislature.

The great object of this bill is to cast the people more *entirely* on their own resources; and if the object had been worked out with reference to any well-known point in the philosophy of human nature, it must be owned the measure is one that every good man would hail as a blessing. But, unfortunately, it is not: on the contrary, it violates all the sympathies of the heart; it deals with man as if he were a machine capable of any direction; and, with a strange inconsistency, (seeing that the very absence of forecast and providence is made the excuse for the measure,) as if he *calculated* the result of all his actions, and made the attainment of parish support the point whither all his hopes, desires, and affections tended and closed; as if man, indeed, were not a being capable of sentiment and feeling; a creature liable to be actuated by sudden impulses, and urged along by passion; and as if all this could be wrought upon and reduced to rule and compass by the terrors of a workhouse system, by wringing and breaking the heart when the wife is forcibly parted from her husband, or when the parent is torn from its child;—in short, by rendering the emotions of our nature, planted within us for our happiness, by a perverse ingenuity, the source of our misery and woe.

In our conscience we believe this bill a fatal error in legislation, unless its pernicious tendency can be checked by private benevolence, and that active spirit of love and charity, to whose existence amongst us we have before alluded. It is for this reason, that, *now especially*, we direct the attention of our readers to the establishment of self-supporting dispensaries. These institutions, worked out on the plan of Mr. Smith, of Southam, their great promoter, all go upon the sound doctrine, that it is the bounden duty of every man to be provident, to regulate his conduct according to the circumstances which surround him, and to use his judgment and forethought so, that when evil comes he shall not be found unprepared. With this design he calls on the poor themselves, who are to receive the benefit of the dispensary, to contribute to its funds; but, in order to prevent any abuse in the charity, by extending its benefits to those who are well able to supply themselves with medical advice

from their own resources, he requires that such poor persons who are willing to contribute should be recommended as fit and proper objects to be allowed to do so by a clergyman, or two respectable housekeepers; and, in the event of the party being a servant, by his or her master or mistress. The parties so contributing are called the free members, and are furnished with a blue ticket.

To assist in promoting the object of the institution, honorary members are allowed to contribute also, and who are permitted, in virtue of their subscriptions, to recommend one patient for each half-guinea subscribed. From this class the managers of the dispensary are selected; and of course, therefore, its success, in a very great measure, depends on their fidelity and attention to its interests. Patients so recommended form the second class, or charity patients, and they are furnished with a white ticket.

It is almost needless to observe that great care ought to be used in distributing these white tickets, and indeed it should be taken as a general rule, that they never should be given away, except in cases of great urgency, or to people in a state of notorious destitution. There is no body of men so jealous of their advantages as the labouring classes; there is no body of men so well acquainted with each other's affairs, or so well able to appreciate the when and the where, that the same assistance, which some amongst them pay for, should be extended to others of them *gratis*. One instance of misapplied charity in this respect does infinite mischief, and, if it is repeated, it becomes an error almost fatal to success, for it tends to disgust and keep down the number of free members, and still more, it strikes at the very root of the principle on which the institution is founded, viz. that of casting men as much as may be on their own resources. It requires, therefore, the very soundest discretion amongst the honorary members in using the power of recommendation thus conferred on them; so much, indeed, that it strikes us forcibly, either that some limit should be placed to the admittance of persons as honorary members, or that the admittance of patients on their recommendation should be subject to the approval of the managing authority. To take away the class altogether seems to us quite impossible; to do so would be to err, as much and as fatally as the Poor Law Amendment Bill does; for the state of society will not admit the casting of the labourer *entirely* on his own resources; and the difficulty of obtaining a living by honest exertion is so great, that in this country the duty of charity becomes an obligation so much the more binding, that not "to deal thy bread to the hungry, and not to take the poor that are cast out into thy house, and when thou seest the naked, not to clothe them" becomes not simply an omission of duty, but a positive, an actual crime.

The third class are parish paupers, unable to subscribe themselves, but admitted by a contract with the overseers. This class is furnished with a yellow ticket. The medical officers of the society are elected, and, when elected, each patient is permitted to choose which of them he pleases to attend him. The rate of remuneration is dependent on the number of patients each officer attends, and thus a stimulant to exertion, if any were wanting, is supplied, and every inducement held out, that proper skill and attention will be afforded to the patient. Children under 15 years of age are admitted as free members, on payment of half the usual contribution.

Parishes contribute a certain sum for every 100 of the population. The rate of contribution for a free member should be as low as possible; and it is said that an annual subscription of four shillings and four-pence, or a penny per week, paid monthly, has been found quite enough. A free member should also be entitled to certain privileges, such as priority of attendance always, and under extraordinary circumstances, might be supplied with a nurse, or cordials, or linen, &c.

These are the leading features of the Self-Supporting Dispensaries that have yet been established. Of course there are many minor details left to be mentioned, but which must vary according to the circumstances of the district in which it may be proposed to establish another. There is a society, whose labours are directed to promote the establishment of these institutions, of whom any further information may be obtained*.

We fear we have trespassed on the patience of our readers much too long, but we cannot dismiss this subject without again expressing our warmest wishes that Mr. Smith's plan may be extended throughout the more populous districts of the kingdom. We feel assured that it carries healing on its wings, and is well calculated to promote the welfare of the poor, wherever they are found.

What effect the general establishment of such dispensaries may produce upon the public health, it is hardly possible to say. But as the poor will by these means be induced to apply, in the early stage of disease, for medical help, we may conclude, that those frightful and complicated disorders that now abound in our hospitals will, at the least, be greatly diminished, both in number and intensity, for they spring, in very many instances, from neglect, and from disregarding those admonitions or symptoms, that nature never fails to give of the approach of disorder. We therefore say to the friends of these institutions, "go on, and prosper,—in the name of the Lord we have wished you good luck!"

We trust the interference of authority will be spared. In the love of centralisation and legislation, now so rife in the House of Commons, we have some fear that an attempt may be made to establish and regulate these dispensaries by Act of Parliament. If this is done, we are satisfied the plan must fail. These institutions will be degraded into jobs, and they will then become deservedly odious in the eyes of the people, for whose benefit they were intended. They will do much better by themselves, left to the individual exertion of the several managing authorities, and the silent but potent advocacy of the good they do, and the benefits they confer. There is no greater error than to suppose that the great body of people do not reflect, that they are not alive to their own interests, or want any solicitations to accept of offers which they believe will be productive of advantage to them. They can, they do appreciate the kindness and attention of their superiors in rank, but at the same time they can, they do, judge of the motive on which it is conferred, and discriminate between the same act when done as an officious interference in their concerns, and when the result of pure and unaffected kindness. It has been said there is no royal way to mathematics; in like manner it may be taken as a truth, that there is no act-of-parliament way to make people happy in spite of themselves.

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* Communications respecting these institutions may be sent, post paid, to Mr. H. L. Smith, Southam, Warwickshire.

CORONER'S INQUEST AT CHATHAM.

A CORONER's Inquest, which continued five days, has been held at Chatham during the last week, to inquire into the cause of death of Mr. William Madden, æt. 78. It appears that for several years he has led the life of a debauchee, and resided successively with different women. During the last seven years, however, he has cohabited with a Miss Green, a woman about twenty-six years of age. The deceased had property amounting to about 5000*l.*, the greater part of which he had willed to this woman. The mass of evidence is so voluminous, that the press of other matter will not allow of more than a brief reference to the medico-legal points in the case.

The verdict pronounced was, "died from poison, but by whom administered the jury have no evidence before them to show." What was the poisonous drug?—A mixture of arsenic and prussic acid, it was affirmed. A curious compound, certainly.

But there are wanting demonstrative proofs that either of these articles had been taken, and the circumstantial evidence is exceedingly imperfect. The old man had been for a length of time infirm, and unable to walk or dress himself without support and assistance. During the day of his death he complained of slight indisposition, but ate of meat and potatoes, and drank a glass of porter. In the evening, betwixt seven and eight o'clock, had tea; in a few minutes after he was attacked with an acute pain in the side, and, exclaiming that his dissolution was approaching, in a quarter of an hour was a corpse. No medical assistance was obtained. Suspicion arising that his death had been unnatural, an autopsic examination was made three days after death. The external surface of the body presented numerous appearances, and which were minutely detailed by one of the medical witnesses, but which were obviously the consequences of incipient putrescence alone; such as swelling of the face, red patches and green streaks on different parts of the skin; the muscles of the chest infiltrated with serum, the parietes of the left ventricle hypertrophied; the valvular apparatus evinced a high degree of vascularity, but the lining of the ventricles was blanched, save in some few points, where these small patches were of a deep scarlet colour; the mucous membrane of the fauces smaller and vascular; the abdomen contained a large quantity of fœtid air, and its parietes were emphysematous; the stomach large; its mucous surface, more especially at the extremities, presented large patches, indicative of recent acute inflammation; some undigested aliment was present in the stomach; the duodenum and jejunum highly vascular; ilium less so; colon and rectum red and inflamed; bladder contracted; liver extremely vascular, and its right lobe in a state of great disorganisation; gall-bladder contained two large gall-stones, but no bile; spleen pulpy; kidneys altered in structure, and of a livid colour; head presented few morbid changes. Such is an outline of the post-mortem phenomena.

Now comes the inquiry into the cause of death. Were the symptoms such as ensue on the exhibition of a mortal dose of prussic acid?—Unquestionably not! Were they such as accrue after a large dose of arsenic?—Every symptom, save one, "pain in the side," was absent, at least, if we are to rely on the testimony of the witnesses. The contents of the stomach were of course subjected to the usual processes for detecting poison. Were the tests satisfactory? Were the

results sufficiently decisive to warrant the inference that arsenic had occasioned death?—Let us see. There was a concurrence of results in the application of the tests; but this affords only presumptive evidence, for it is a well known and acknowledged fact, that other metals besides arsenic would have given similar precipitates. And the reduction of the metal, the only test to be relied on, was admitted in this case to be incomplete. The signs of any poison having been received into the stomach are exceedingly equivocal, and from the rapidity with which death ensued, and other collateral circumstances, we feel disposed to pronounce that *arsenic* had not been taken. What indications do the morbid appearances display?—The same state of the mucous lining of the alimentary canal, as is observed in a countless number of cases of chronic disease, the same amount of swelling, of injection of the capillaries, and of patches of redness in the stomach, frequently exist without any supposition that poisonous agents have produced them.

Foreign Hospital Reports.

HÔPITAL D'ALGER.

Excision of the Head of the Humerus, of the Glenoid Cavity, and the Spine of the Right Scapula, consequent on a Gun-shot Wound. Cure in twelve days.

A SOLDIER of the 4th regiment of the line, æt. 22, of a good constitution, received a gun-shot wound in the right shoulder, at Bougie, January 6th, 1834. The head of the humerus, glenoid cavity, and spine of the scapula, were fractured.

Three months after he received the wound he was taken to Algiers, where he entered the Hôpital Cavatine. He was then the subject of diarrhœa, but not much emaciated; the wounds of the entrance and exit of the ball were freely suppurating: the pus healthy. A common sound introduced into the wound showed the existence of a sinus ten inches long, and apparently filled with splinters. For some time the remedial measures were directed chiefly against the diarrhœa, the shoulder being poulticed; but the symptoms becoming more urgent, on the 14th of May it was determined that an operation should be performed, and it was finally determined to excise the head of the humerus, and all the injured parts of the scapula.

The patient being placed in a chair, and the softer parts put on the stretch, M. L. Baudens, the surgeon, made an incision in the mesial line about six inches long, from the acromion downwards, dividing the deltoid to the bone; by this incision the head of the bone could be seen reduced to splinters, some loose and necrosed, others still adhering. An incision, about two inches long, was then made at right angles with the preceding, in order to ascertain whether the coracoid processes were injured, which was found not to be the case.

After several splinters had been removed with difficulty, the head of the bone was separated from its attachments posteriorly, which were almost fibro-cartilaginous in their nature, and then sawn across immediately above the surgical neck, the soft parts being duly protected from the action of the saw.

The first incision was then carried six inches backwards, extending from the acromion along the lower margin of the spine of the scapula, and separating the attachment of the deltoid; another stroke of the bistoury separated the trapezius from the upper edge of the spine. Parts of the supra and infra spinata being diseased were then removed, and the saw was then applied close to the root of the spine and acromion, and these processes totally removed, thus laying the supra and infra spinal fossæ into one. This incision was about twelve inches long, and enabled M. Baudens to apply the saw to the glenoid cavity, and remove all the diseased and carious parts.

Three ligatures were applied on arterial branches during the performance of the operation, so that scarcely two ounces of blood were lost, but the patient having fainted several times, in consequence of his sufferings being very protracted, he had an æther draught previous to the application of the dressings.

The parts were brought together by eight sutures, except at the lowest part of the wound

which was kept open by a piece of lint to allow a free exit for the pus.

The dressings were changed on the eighth day, and cicatrisation had taken place, except where the tent was placed. On the 12th the sutures were removed, and caustic applied to the granulations of the gun-shot wounds, very little suppuration ensued, the diarrhœa gradually diminished. By the tenth day the patient had some little power with his arm: he could move it backwards and forwards, but the deltoid was not strong enough to raise it.

HÔPITAL BEAUJON.

M. Blandin, one of the surgeons of this hospital, has recently employed a new splinter in cases of fracture at the lower end of the radius, in order to prevent displacement of the hand, and deformity of the limb. The splint is much the same as those usually employed for the fore arm, but there is an additional part bent, to be applied along the hand, the bend taking place opposite the radio-carpal articulation, its convexity turned to the radial, and its concavity to the ulnar side. By means of these splints, the hand is brought into the state of adduction, and inclined towards the cubital side of the fore-arm, so that displacement of the lower portion of the radius, and deviation of the hand outwards, are prevented. They have been used now for five months, and with great success. They are especially applicable in fractures of the lower portion of the radius, or of both bones; in either of these cases, the splints should be applied as already directed; in cases of fracture of the ulna near the radio-carpal articulation, they must be applied in an inverse manner, namely, the bend being still opposite the radio-carpal joint, its convexity must correspond with the cubital, its concavity with the radial side.

Case I.—A young man, 18 years of age, fell from a first floor window on the pavement, on the right hand. On rising, he found the fore-arm deformed, painful and useless. A surgeon, who was immediately called, did not ascertain the existence of a fracture, which was not discovered until the next day; leeches only were applied.

Another surgeon having seen him, a fracture of the lower end of the radius, just above the articulation, was discovered, and he was sent to the hospital. The usual symptoms of fracture were present, with the addition of considerable external inflammation. The splints, with the bend already described, were applied, but loosely; rest, with gum water, &c., prescribed; also syrup of diacodium, ℥ j. He was admitted the 5th of May; the inflammation subsided under the treatment pursued, and the splints could then be applied more tightly; it was considered necessary to reapply them occasionally, and on the 10th of June they were removed altogether, and a bandage only applied; there was then some œdema of the extremity, but no deformity. He left the hospital on the 16th, when there was still some stiffness in the motions of pronation and supination.

Case II.—A painter, 59 years of age, slipped from a ladder, and fell on the left wrist. This happened on the 1st of May; on the 2nd the joint was found to be swelled, painful, and red, with but little deformity; crepitus could not be distinguished, but pronation and supination appeared difficult; the head of the radius appeared to move with the rest of the bone. Thus far the case seemed not to be one of fracture, but in a few days the deformity became more marked, and on the 13th crepitus could be felt; there was evident depression at the lower end of the radius, and the head of that bone did not roll as completely as before with the lower end. The curved splints were therefore applied. On the 28th of June they were removed, when callus could be felt at the lower part of the radius.

He left the hospital the 3rd of July, with deformity, and possessing free motion.

HÔPITAL ST. ANDRE, AT BORDEAUX.

Tumour, simulating the Scrotum and Testicles, in a Female.

Pétronille Morisset, ætat. 37, residing at St. Laurent, in Médoc, was admitted the 2nd of July, and was carefully examined by M. Moulinie, the principal surgeon.

On examination, a tumour, about six inches in diameter, was discovered in front and a little to the left of the vulva. The skin which covered it was of a brown colour, wrinkled, and rather hairy; it was relaxed, like that of the scrotum. Within this could be felt two distinct bodies, about the size of

pigeons' eggs, partly moveable and smooth, having the shape and density of testicles. A softish shapeless mass was continued from these ovoid bodies to the external abdominal ring; the lower part of this mass gave the feel of varicocele, and the *tout ensemble* of the tumour gave exactly the shape, degree of density, and volume of the scrotum of testicles.

This woman was the mother of two children, and had all the attributes of her sex. The tumour had been in existence about twelve years, and was gradually increasing in size; it did not cause any pain, and was only inconvenient by its size and weight.

A consultation was held on the case, and afterwards an incision was made, and the tumour examined. The mass already alluded to, as resembling varicocele, was found to be a prolongation of the round ligament of the uterus, with ligamentous tumours attached; the bodies resembling testicles were two of these bodies larger than the rest. The operation was performed as for castration.

For several days after the operation, the patient complained of pains in the loins, which disappeared after the separation of the ligature. Suppuration took place, formed a collection, ulcerated through the vulva, and thus made an exit for itself. The relaxed integument gradually contracted, and the patient ultimately did well.

The preparation is deposited in the anatomical cabinet of the Ecole de Médecine.

British Hospital Reports.

ST. THOMAS'S HOSPITAL.

Complete Failure of Créosote in Phthisis Pulmonalis.

The créosote has been made use of in this affection, in several cases under the observation of Dr. Elliotson and Dr. Roots, and in every one that it has been administered a complete failure has been the result.

Case I.—H. B., a woman 42 years of age, who for the last three years had suffered from slight cough, with occasionally darting pains about the chest. On the 21st of June, was admitted into the hospital; at this time great emaciation had taken place; her countenance slightly flushed; complained of difficulty of breathing, and of constantly being disturbed by a violent cough. On auscultation, cavernous respiration was heard on the upper part of the right side of the chest, where, at times, pectoriloquy was also evident. On the left side, also, indistinct pectoriloquy could be heard, and she expectorated an immense quantity of pus; sweated much; could get no rest; bowels relaxed. In this case, after the diarrhœa had ceased, Dr. Elliotson prescribed two minims of the créosote, which she was to take three times a day. After continuing the use of this medicine some days, it was increased to ℥iij., then to ℥ iv., ℥ v., and ℥ vj. At first some relief appeared gained; nocturnal perspiration ceased; but though she continued to persevere some weeks with this medicine, which by Reitch has been described as curing this disease, she nevertheless, in about the usual time, fell a victim to its ravages. On the autopsy, cavities on each side confirmed the previous diagnosis.

Case II.—John Watts, æt. 43, of scrofulous diathesis, was admitted on the 27th of June last with cough, and shooting pain in the left side of the chest, very much increased on taking a full inspiration. By a stethoscopic examination, pectoriloquy over the upper part of the right lung indicated the existence of a cavity; also opposite the cartilages of the third and fourth ribs was distinctly heard a creaking sound, as if produced by two edges of the pleura rubbing against each other. Perspires at night; cough, &c. On the 4th of July, after being in the hospital a week, he commenced the créosote; three drops were prescribed at first. Up to the 31st of the month he continued this medicine, the dose being gradually increased to six minims, without the least benefit being obtained. The only perceptible effect the créosote produced in this patient, was by producing slight giddiness; but this is uncertain, as the man had been subject to attacks of vertigo previous to his taking it. He now left the hospital, and, if any thing, worse than when he entered it.

Case III.—Berrington Harger, a coachman, came into William's Ward, 6th July. States four years ago had a severe fall, after which he coughed up a large quantity of blood, and since then has continually been troubled with cough. A month ago his cough became much worse, accompanied with expectoration, dyspnœa, and a sense of constriction across the chest. Stethoscopic signs, cavernous respiration, mucous gurgling, crepitous rattle over the right side of the chest. Six drops of créoso·e were given him twice a-day; from this dose he felt a sensation of nausea, consequently it was reduced to three, and afterwards gradually again increased to six. He continued to take this medicine till within a day or two of his death, without producing any alleviation of his symptoms, and this catastrophe took place on the 4th of August. In this case, the friends would not permit a post mortem examination.

Case IV.—William Baker, a sailor, æt. 24, admitted July 11th. Has been ill for six

months with cough and spitting of blood, which first came on after carrying a heavy load. The hæmoptysis continued for three weeks, but the cough has continued to increase. In March the spitting of blood returned, lasted about four days, during which period he lost a considerable quantity of blood. Cough increased in urgency and frequency; is now accompanied with purulent expectoration. Great emaciation; sweats profusely during the night.

On auscultation, submucous and cavernous respiration was heard on the upper part of the right side of the chest. Dr. Elliotson, in this case, prescribed the inhalation of the créosote for a quarter of an hour daily. This he continued for some time; however, finding no relief, he discontinued it on the 26th of last month. After this means had so completely failed, external irritants were applied, from which he experienced relief. Emaciation, nevertheless, continued, nocturnal perspiration increased, and, by the recommendation of Dr. Elliotson, he left the hospital.

APOTHECARIES' HALL.

NAMES of those gentlemen to whom the Court of Examiners granted Certificates of Qualification, Thursday, August 14th.

Francis Freeling Hart . Harwich.
Moses Preston . . Emmott, nr. Colne.
James Jervis . . Sheffield.

BOOKS FOR REVIEW.

Traité théorique et pratique des Blessures par Armes de Guerre, rédigé d'après les Leçons Cliniques de M. Le Baron Dupuytren, Chirurgien-en-Chef de l'Hôtel Dieu, et publié sous sa direction, par MM. les Docteurs A. Baillard et Marx. Tome 1e in 8°. 7 fr. Paris et Londres, 1834. J. B. Baillière.

A Demonstration of the Nerves of the Human Body. By JOSEPH SWAN. 4to. 25 Plates, and descriptive letter-press.

Essay on Poisons. By Dr. T. CASTLE. Sixth Edition, 21 coloured Plates.

CORRESPONDENTS.

Professor Cooper and Dr. Stokes's Lectures in our next.

Professor Lizar's communication has been attended to.

Dr. F.'s communication on the treatment of cholera by galvanism is not of sufficient interest for our pages. The cases recorded by him are not a sufficient proof of the efficacy of galvanism in controlling this affection.

A Subscriber.—The Meteorological Journal of Messrs. Harris, given weekly by us, is kept by a self-registering thermometer, and taken at 8 o'clock every morning, consequently we get the extreme heat and cold of that day and approching night; the morning following then it is set again, and so on progressively. The barometer is taken at 9 A. M. and at 10 P. M.; with respect to the actual amount of rain, it would be attended with too much trouble and inconvenience, and therefore can only be given monthly, as heretofore.

The hygrometer is noticed at the same period as the barometer.

We are much obliged to Mr. Smith for his communications; in another part of our Journal, he will find his articles fully discussed. His reply to Mr. Aaron shall be noticed in an early number.

Mr. Shepherd's paper on a new invented instrument for the extraction of stumps, in our next.

J. R.s communication is under consideration.

H. B.—Mr. Brodie will be created a baronet.

METEOROLOGICAL JOURNAL.

MONTH. Aug., 1834.	Moon.	Thermom.			Barometer.		De Luc's Hygrometer.		Winds.		Atmospheric Variations.		
14		69	72	60	29·77	29·78	64	65	N.	N.	Fine	Fine	Fine
15		67	73	63	29·81	29·81	68	70	N.N.W.	N.N.E.	Cloudy	——	——
16		68	74	65	29·85	29·87	71	68	N.N.E.	E.N.E.	Fine	——	——
17		69	74	60	29·92	29·85	68	70	N.W.	N.W.	——	——	——
18		70	74	62	29·76	29·64	70	69	N.	N.N.W.	——	——	——
19	○	70	73	65	29.65	29·62	69	70	N.	N.W.	——	——	——
20		68	72	67	29·53	29.	72	67	N.W.	W.S.W.	——	——	——

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ALL Communications and Books for Review to be forwarded (free of expense) to the Publisher, 356, Strand, near King's College.

THE

London Medical and Surgical Journal.

No. 135. SATURDAY, AUGUST 30, 1834. Vol. VI.

LECTURES

ON THE

PRINCIPLES, PRACTICE, & OPERATIONS OF SURGERY,

BY PROFESSOR SAMUEL COOPER.

Delivered at the University of London, Session 1832—1833.

LECTURE CIII., DELIVERED MAY 7, 1833.

Gentlemen,—With regard to strictures in the urethra, you ought to remember that they will sometimes give rise to paroxysms of intermittent fever. I have seen many examples of this fact, and, in some of them, the ague had been treated without any suspicion having been entertained of its real cause.

A stricture, when examined in the dead subject, is often found not to occupy a great extent of the passage, the contraction being sometimes not broader than what would originate from a piece of packthread drawn tight round the urethra. Here, gentlemen, is a preparation, consisting of the penis and bladder, with such a stricture about four inches down the urethra, and fistulæ in perinæo behind the obstruction. Suppuration also took place behind the prostate, but this abscess did not communicate with the urethra. You may observe, that the canal behind the stricture is much dilated. In some cases, however, the stricture does not correspond to this description, but the urethra is contracted along a considerable portion of its course, in which event its inner surface is exceedingly irregular, and sometimes as indurated and tough as cartilage. Here, gentlemen, I place before you a specimen of a very extensive stricture, with the lining of the bladder covered with a layer of coagulable lymph, that has been effused in consequence of inflammation. In particular instances we find that the contraction or diminution of the tube is only on one side of it; while, in others, it amounts to a circular narrowing, or constriction of the passage.

The most frequent place for a stricture is just behind the bulb of the urethra, or about six and a half or seven inches from the orifice, in the anterior part of the membranous portion of the canal. The preparation, which I next pass round for your inspection, is an instance of a stricture near the bulb. Perhaps the situation, next in order of frequency, is about four and a half inches from the extremity of the penis; then three and a half; and sometimes close to the opening in the glans. I believe one remark, that is occasionally made on this part of the subject, is perfectly correct, namely, that strictures anterior to the bulb are less liable to be influenced by spasm, if they can be so affected at all, than other strictures more posteriorly placed in the canal.

It was the doctrine of Sir Everard Home, that, in the generality of cases, where only one stricture exists, it is just behind the bulb; and that if you find others more forward, you are still almost sure of meeting with one in the former situation. In the advanced stages of stricture, there is frequently a remarkable dilatation of the passage behind the stricture, as exemplified in one of the preparations you are now looking at. In one case, under the care of Mr. Brodie, whenever the patient attempted to make water, a tumour, as large as an orange, was formed in the perinæum. When strictures have continued a long time, and increased to a certain degree, the bladder is required to make greater efforts than natural to expel the urine, and the result is a great thickening of its muscular coat. The same change was mentioned to you yesterday evening, as commonly seen likewise in persons whose discharge of urine is not so free as it ought to be; and who suffer occasional retentions of it in consequence of the effects of disease of the prostate gland or the portion of the urethra which pervades this body. In cases of stricture when the patient has often suffered from retention of urine, it is no uncommon thing to find, after death, the ureters themselves vastly dilated. I have known them, in some instances, assume the appearance of two glass tubes three quarters of an inch in diameter, distended with transparent urine.

Then, amongst the bad consequences of stricture, gentlemen, I must not omit to notice the unfortunate and too often fatal occurrence of a rupture of the bladder or urethra, arising

from unrelieved retention of urine. The bladder itself sometimes gives way; but occasionally, and indeed more frequently than the bladder, a portion of the urethra behind the stricture sloughs, and the urine becomes effused.

It is not an uncommon opinion that strictures promote the origin and increase of disease of the prostate gland. They certainly do so, inasmuch as inflammation and abscesses about it are concerned; but I am not sure that they have much or any share in bringing on the indolent enlargement of that gland, so common in elderly persons. Bad strictures unquestionably keep up a disposition to chronic inflammation of the mucous coat of the bladder, and hence it may be thickened, as well as the muscular fasciculi of the detrusor. You will, indeed, often notice what is termed an *irritable bladder*, as a complication, or rather an effect, of strictures.

Then, gentlemen, another change resulting from strictures is the *formation of sacs or cysts in the bladder*, the production of a *sacculated state of this organ*, in the same manner as takes place in many instances of diseased prostate gland, and of which I showed you some specimens at our last meeting.

If strictures are suffered to reach a certain stage, you find that abscesses form about the neck of the bladder, the prostate gland, or in the perinæum. I have opened a good number of individuals, who have died from the effects of very bad strictures; and, in a large proportion of these cases, I found not only extensive abscesses in the cellular membrane of the pelvis, but disease and suppuration in the kidneys.

In studying diseases in general, gentlemen, I advise you always to make yourselves acquainted, if possible, with their causes. Now, with regard to strictures of the urethra, it is a common belief, that gonorrhœa is the most frequent cause of them; a view, however, that was rejected by John Hunter, on the ground that most of the ducts and passages in the human body, lined by mucous membrane, are subject to stricture. Then, another idea is, that though gonorrhœa may not have this effect, the astringent injections employed for its cure may bring on strictures. This is a point on which the highest authorities differ, as you already know from what I stated in the lecture in which the subject of gonorrhœa was considered. It seems to me tolerably certain, that a long residence in the East or West Indies, and the mode of life there pursued, give a disposition to strictures. At all events, in the better classes of society, you will find strictures particularly frequent among those individuals, who have passed a considerable portion of their lives in a tropical climate.

Gentlemen, the treatment of permanent strictures is conducted on various principles:

1st. On the principle of mechanically dilating the contracted part of the urethra with common bougies, catgut bougies, elastic gum bougies, metallic bougies, or sounds, or elastic gum catheters retained in the passage.

2nd. On the principle of producing a destruction of the stricture by making it ulcerate by the pressure of common or metallic bougies, or slough from the effect of escharotic applications to it.

3rd. On the principle of perforating the obstruction with a conical sound, a plan, however, only sanctioned in bad cases, not yielding to milder methods.

4th. On the principle of piercing the stricture with a sharp instrument, introduced down to it through a tube.

5th. By cutting down to the stricture, removing the obstruction with a knife, and then introducing a catheter, and healing the wound over it.

The Cure by Dilatation may be regarded as that which, on the whole, retains the greatest share of approbation, though particular circumstances may sometimes call for some of the other methods. The cure by dilatation is accomplished by common bougies, metallic bougies, and sometimes by means of steel sounds and silver catheters of various sizes. They are all intended to act upon the principle of a wedge, and thus to dilate the contracted part of the canal. However, the action of such instruments is different from what it would be on inanimate matter; and the living parts, which are pressed upon and distended by them, undergo certain changes, in consequence of such pressure and distension, which are the result of processes depending upon life. Thus, the parts either adapt themselves to the pressure, or recede by ulceration.

Strong as the symptoms of stricture may be, which I have already enumerated, you require a more unequivocal proof of its existence; and you wish also to know what part of the urethra is contracted, and in what degree. For this purpose, you first carefully examine the urethra with a well-oiled bougie of nearly a full size; for, if you employ too small a one, it may pass through a moderate stricture without any stoppage, or it may deceive you by its point becoming entangled in one of the lacunæ of the mucous membrane. All bougies above a certain size should be cylindrical—not conical, which shape would distend the orifice of the urethra too considerably. The stoppage of the instrument, together with well-marked symptoms of impediment to the free escape of the urine, may be regarded as proofs of stricture. If doubts exist, pass a metallic sound, or silver catheter warmed, and try whether you can then gain more positive information.

Supposing you find that there is a stricture, the next object is to get as large a bougie through it as it will admit; but often only a small one will pass; and, if you can succeed in doing this, you then know that the dilatation of such stricture is in your power; for, by leaving this small bougie in the passage a few minutes, you will find the constricted part of

the canal still more capable of receiving this bougie again, or another bougie of rather larger size, on the next trial, which should be made in two or three day; then withdraw it, and introduce one of larger size. In this manner you proceed gradually, getting on from small to full-sized bougies, with which the cure is completed.

Then, gentlemen, with respect to the questions—how often the bougie should be introduced, and how long kept in the stricture, there is no invariable rule to be followed; but much must depend upon the patient's capability of bearing the use of the bougie without too much irritation. With this qualification, I may advise you to let the bougie be employed every other day, and be worn for twenty minutes, half an hour, or an hour, if the patient has favourable opportunities for it. The principle is to increase the size of the bougie, as fast as the yielding of the stricture will allow.

Of late years, metallic bougies and conical sounds of different sizes and curvatures have been extensively employed. They are sometimes found to pass more readily along the passage, and you have the power of directing their point to either side, an advantage which does not belong to common flexible bougies. Bougies, also, in consequence of their bending or cracking, are not so well calculated for examples, in which the instrument must be used with some degree of force.

To common and flexible metallic bougies you can give any curvature you think proper; but, with respect to steel and silver sounds and catheters, they are always constructed with determinate curves, adapted to the urethra of different individuals.

The advantages of a waxen bougie are, that one of much smaller size than any metallic instrument can be safely employed; because metallic instruments, if constructed of similar slenderness, would be liable to break. I scarcely need observe, that the minute diameter of some bougies is an important advantage, when the stricture is close, and will not admit a larger instrument.

The smaller silver sounds are usually made of silver; the larger of steel plated. I believe it is best to have them but slightly curved, and not more than eight or nine inches long. In using them, be sure not to employ too much violence, which would make a false passage; and you will more certainly avoid this risk, if you take care to make the beak glide along the upper surface of the urethra. After having passed one of the sounds, repeat the introduction of it again in two or three days. In many cases, you will find it best to begin with small bougies, and then to go on with sounds, in the manner recommended by Mr. Brodie. The latter instruments are frequently advantageously applied to old gristly strictures, and to cases complicated with a false passage.

You may ask, to what size should we carry bougies, sounds, and other instruments, used for the removal of strictures? In answer to this question I may remark that some practitioners gradually proceed to bougies which are thicker than the little finger; but I never follow their example, finding that instruments of more moderate diameter answer every purpose. Bougies act, as Mr. Hunter has observed, on living parts, constituting the obstruction or contraction, and these parts recede, or, in other words, are absorbed under the application of the instrument, so as not to require the passage to be distended in any extraordinary degree.

In common cases of stricture, the most successful practice is that which is conducted on the principles of gentleness and skill; and those surgeons, who employ great force and rough manual proceedings, not only put the patient to a great deal of unnecessary pain, but expose him to the danger of abscesses in the perinæum, profuse hæmorrhages from the urethra, and the formation of a false passage.

It is well known to all men of experience, that strictures of the urethra are very liable to return: when, therefore, you have dilated the contracted part or parts of the passage, as far as you consider advisable, you should recommend the patient still to continue the use of a large bougie occasionally. In my opinion it is much better for a man to pass the instrument himself once a fortnight, or once a month, for some considerable time after the end of the treatment, than to run the risk of having a relapse.

Gentlemen, I will next make a few observations on the cure of strictures with elastic gum catheters, a plan that has been preferred by some very eminent surgeons abroad to all others as a general one. If you resort to this method, and succeed in getting the catheter through the stricture, it is a good rule to do what Mr. Brodie recommends; viz., let the instrument be kept in the passage day and night, for three or four days; then taken out, and one of larger size passed, and allowed to remain. This mode of treatment is deemed by this gentleman advantageous, 1. When the patient's time is of high value, because the stricture can thus be more quickly removed, than by any other means. 2. Where the stricture is dense and cartilaginous. 3. Where the urethra is irregular, or a false passage has been made. 4. Where rigors follow the use of the common bougies; for it is an observation made by Mr. Brodie, that rigors are most disposed to take place when urine first comes in contact with a part of the urethra that has just been dilated, which contact is prevented very much by the catheter, through which the bladder should be emptied.

Now, in very close strictures, you sometimes cannot succeed in getting any bougie immediately through them. You must then either endeavour to make way through them by exciting ulceration, that is to say, by pressing the end of the bougie with some force against

the obstruction daily until the part ulcerates, or you may try some of the other methods to which I have alluded. Now, it was the difficulty of getting through some strictures, which led to the employment of escharotics for their destruction. Another reason was also urged in favour of this practice, namely, that it produced a radical cure, whereas the treatment on the principle of dilatation only relieved the patient temporarily, as the stricture generally returned some time after the discontinuance of the bougie. I believe that, in this respect, one method is not better than the other; whether you use common or caustic bougies, the patient will sometimes have a relapse.

As long ago as the time of Wiseman, red precipitate had been conveyed on the end of a bougie down to the strictures; but it was not till the period of John Hunter, that a more skilful way of applying caustic to strictures was suggested. This was by passing a piece of the nitrate of silver through a canula, by means of a piece of wire down to the stricture. Afterwards a still better method was introduced by Sir Everard Home, who caused a portion of the nitrate of silver to be fixed within the extremity of a common bougie, which, thus completed, was called an *armed bougie.*

A full sized common bougie is first introduced down to the stricture, and a mark made with the finger-nail on the instrument close to the orifice of the urethra. Thus you have the measure of the distance of the stricture from that orifice. You withdraw this first bougie, and taking the armed one, which should be of the same size as the common one previously introduced, you make a mark upon it precisely at the same distance from its point, as that already made on the bougie employed for the first measurement of the distance of the stricture from the orifice of the urethra. You then oil it, and pass it quickly along the urethra, until the arrival of the mark at the orifice of the urethra denotes that the caustic has reached the stricture. The caustic is then to be steadily applied for a minute or two against the stricture, and the bougie immediately afterwards withdrawn. This plan is followed up three or four times a week, and each stricture attacked in succession, until the urethra is free.

By some judicious and experienced surgeons, it is still maintained that this treatment is advisable for spasmodic strictures, for old strictures with spasm, and for peculiarly irritable strictures. The following objections, however, are urged against the practice by others, viz., hæmorrhage—severe constitutional disturbance—the risk of making a false passage—the bringing on of inflammation of the passage and retention of urine—swelled testicles, and abscesses in perinæo.

Now, fashion has a good deal of sway over surgery as well as over other affairs, and, after the nitrate of silver bougies had made some noise, the late Mr. Whateley brought forward another mode of treating strictures with caustic. In short, he boasted of the wonderful effects of minute atoms of pure caustic potash, weighing only one-seventeenth of a grain. They were taken out of a bottle at the moment when they were wanted, and pressed into a depression at the end of the bougie, and smeared over with cerate. No doubt Mr. Whately cured strictures, but he did not cure them in the way he supposed; his bougie, armed with this soapy mixture of fat and one-seventeenth of a grain of potash, would have no caustic effect, but operated merely on the principles of pressure and dilatation. For my own part, I ascribe much of the action of other armed bougies to the same principles.

The employment of caustic has, for some time, been going gradually out of fashion in this country, and in France the practice was never adopted to any extent. Ordinary cases do not require armed bougies, and very bad cartilaginous strictures, attended with induration and more or less extensive contraction and thickening of the mucous membrane, are manifestly examples, which the nitrate of silver would never relieve. At the same time I believe, that where a stricture is peculiarly irritable, such irritability may sometimes be more quickly removed with the nitrate of silver bougie, than any other instrument.

Then, gentlemen, what is to be done where common plans completely fail? Would you cut down to the stricture, after having passed an instrument into the urethra, as far as the commencement of the obstruction, endeavouring next to cut through the diseased portion of the passage, so as to find the continuation of it between the stricture and the bladder, and then to convey the catheter into that organ? I have seen this operation sometimes done with success, but more frequently the operator failed to find the continuation of the urethra. The difficulty proceeds from the great change and thickening of the urethra, and not only of this canal itself, but of the cellular membrane and more external parts. You have to cut into a mass with which you are likely to become very much perplexed. At the same time, the point of the staff, or catheter, is an important guide, and, it is to be remembered, that, in the generality of these cases, the membranous portion of the urethra behind the stricture is considerably dilated; a circumstance that ought to facilitate the finding of it. I believe the danger of the operation is overrated, though not its occasional difficulty and frequent failure. The patient, from whom the parts in this preparation were taken, underwent such an operation. Here you see the penis and bladder, with a bougie passed through the urethra, and a bristle introduced, marking the place of an incision in the perinæum. The stricture was cut through.

Then another method consists in perforating the stricture with a stilet, which is adapted to a kind of catheter, or tube, out of which it is made to project after the instrument has

been passed down to the stricture. It is an old practice but revived in modern times. In 1795 it was introduced again by Dr. Physic, of the United States, who found it very successful. Of late years it has been practised in England by Mr. Stafford and others. The objections, commonly urged against the method, are the risk of hæmorrhage, and the chance of not making the perforation in the right direction. But, in obstinate cases, some risks must, I believe, be encountered; and this will happen whether you cut down to a cartilaginous stricture, or perforate it through a canula, or force a conical sound through it. Mr. Stafford's cases, many of which he has published, show that the danger of bleeding has been much exaggerated. With regard to the forcible passage of a conical sound through the stricture under urgent circumstances, I confess, gentlemen, that of this practice I entertain a very unfavourable opinion, whatever may be thought of the same mode of proceeding in retention of urine, arising from enlarged prostate gland. Indeed, I should be exceedingly reluctant to adopt so uncouth and unscientific a method, which must always be attended with great danger of *producing a false passage.*

Gentlemen, from the observations already delivered in these lectures, no doubt you are aware that a *false passage,* as it is termed, is one caused by the laceration of the mucous membrane of the urethra by the forcible and unskilful introduction of a bougie or catheter in a wrong direction. One consequence of such an injury is, that, when an instrument is afterwards passed, the end of it goes into the new passage, and cannot be made to act upon the stricture, or find its way into the bladder.

It scarcely admits of a doubt, I think, that a false passage is sometimes made, and heals up without any inconvenience, except a degree of hæmorrhage at the time of the accident. Indeed, if you were to suspect the occurrence directly after it had happened, you would, perhaps, give the patient the best chance of the laceration healing up without trouble, by directing him to retain his water a few hours, and then passing a catheter of larger size, and more curved, than that which produced the false passage, so that its beak may be kept close against the upper surface of the urethra. I believe, with Mr. Brodie, that a false passage is generally made by letting the end of the instrument press too much against the lower surface of the membranous portion of the urethra, though the forcible propulsion of this part of the canal to one side or the other may sometimes lead to similar mischief.

When a false passage has been produced in the treatment of a stricture, Mr. Hunter used to introduce a staff as far as it would go, which he calculated would generally be to the bottom of the new passage, and of course beyond the stricture. The end of the instrument was then felt for outwardly, and cut upon. The new passage was next slit open to its junction with the urethra, at a point beyond the stricture; a probe or director was now passed in the direction towards the glans penis, and necessarily towards the stricture. On its further introduction being impeded by the stricture itself, this was cut through, and the operation was finished by withdrawing the probe, and introducing two canulæ, one through the wound, and the other through the urethra, until they came together, when they were held securely, a perforator pushed through them, so as to divide the obstruction, and then a bougie, after which the tubes were removed. The operation is now simplified by passing a catheter directly the stricture is divided, which part of the operation can also be now more conveniently done with the instrument suggested by Mr. Stafford.

Sometimes, gentlemen, *profuse hæmorrhage follows the introduction of bougies or catheters;* in such cases, I recommend you to try the effect of cold lotions on the perinæum, or, what is still better, the cold bath itself. If your patient be a strong, robust subject, you may have recourse to venesection. In one instance, under the care of Sir Astley Cooper, the hæmorrhage was so profuse, that it was judged necessary to divide the artery of the bulb; a measure which had the desired effect.

Fistulæ in Perinæo are ulcerated openings in the perinæum, formed in examples of bad stricture, for the escape of the urine, the urethra ulcerating behind the obstruction. Here, gentlemen, is a preparation exhibiting fistulæ in perinæo formed in consequence of strictures in the urethra, with which they communicate by an opening capable of receiving the end of the largest catheter. The bladder you see is very much thickened, an ordinary occurrence in such cases. When *fistulæ in perinæo* are about to form, the patient generally experiences an increased difficulty of making water; perhaps he is attacked with shivering, followed by other febrile indisposition, and then considerable tenderness begins to be felt in the perinæum, a hard tumour, with some degree of œdema, presenting itself in that part, or its vicinity. The skin next inflames, and a fluctuation is felt. The abscess bursts or is opened, and a considerable quantity of very fœtid pus is discharged, sometimes blended with urine from the first, and, in other instances, no urine coming out of the aperture till two or three days have elapsed. The discharge of pus then diminishes, but the urine flows in larger quantities, and whenever the patient makes water, a part of it escapes through the natural channel, and the rest through the orifice of the abscess. Sometimes instead of one, there are several external openings produced.

I wish you to remember in the next place, gentlemen, that as the urine continues to flow through the cavity of the abscess, the track of the purulent matter becomes lined with a texture very closely resembling that of mucous membrane, and the adjoining parts assume a hard and callous consistence. Fistulæ of the

same nature may form in the scrotum, in the groin, or even on the penis near the pubes.

Gentlemen, it is hardly necessary for me to inform you that, when fistulæ in perinæo are established, the patient is no longer liable to attacks of retention of urine. Some time ago, I had a patient under my care in the King's Bench Infirmary who was in a curious state, for in consequence of the whole of his urine having passed for several years through fistulæ in the perinæum, all the urethra anterior to their communication with it appeared to have been completely obliterated.

In a few rare cases, the urinary fistulæ form a communication between the rectum and the portion of the urethra behind the stricture; a complication, the possibility of which you ought to recollect. I may lay it down as a general principle, that abscesses in the perinæum, or near the prostate and neck of the bladder, should be opened early. The cure of fistulæ in perinæo must obviously depend upon that of the strictures themselves, for, in proportion as these give way, the urine resumes its natural course, and the fistulous openings heal. If they should not do so, however, I advise you to pass a gum catheter into the bladder, and confine the patient for a few days to bed. Sometimes you will find, however, that when the communication with the urethra is unusually large, when the urine flows by the side of the urethra, or when the catheter excites a great deal of suppuration in the passage, the plan which I have mentioned, and which has the authority of Mr. Brodie in its favour, will not answer. Under these circumstances, let the patient be taught to pass the catheter himself, and let him for some time never make water without having first introduced it, the practice adopted by the same eminent surgeon. You should also do another thing which he particularly advises, namely, stimulate the bottom of the fistula with nitrate of silver, while you retard the healing of its orifice by touching it once a week, or once a fortnight, with caustic potash.

The last subject, gentlemen, which I shall be able to consider in the present course of lectures, is *retention of urine*, a case that should not be confounded with *suppression*, which properly means an interruption of the secretion of that fluid, none being discharged, because little or none is formed by the kidneys. You may have frequently noticed this fact in the late epidemic cholera.

In retention, the urine is poured into the bladder by the ureters, but, either owing to a want of a power in the bladder, or to an obstruction in the urethra, it is not properly discharged.

In a retention of urine, of course, there is a distension of the bladder,—very perceptible in the hypogastric region,—a swelling, indeed, often reaching as high as the navel, attended with a distinct fluctuation that can be felt through the parietes of the abdomen as well as within the rectum. The patient suffers great torture; there is a hot dry skin; thirst; and an accelerated pulse, and other marks of febrile disturbance.

The bladder sometimes continues distended with urine, notwithstanding the patient may void it at periods in a stream, and even pass, in the 24 hours, the quantity usually discharged by a person in health. But, then, he discharges merely the overflowings of the bladder, as it were, and though the water may dribble away, or even sometimes come out in a stream, that receptacle is never truly emptied, but remains with an accumulation of urine. This is the *retention par regorgement*, as it is termed by the French surgeons.

Now, gentlemen, I may tell you, that, in cases of this description, serious mistakes are apt to be made in practice. A certain quantity of urine is discharged from time to time; a retention is not suspected; and the patient, of course, does not receive the benefit of proper treatment. I advise you, therefore, to remember well these retentions *par regorgement*, and in all doubtful cases to examine the hypogastric region, and introduce a catheter. This last proceeding can never do harm; it is fraught with no peril, not even with severity; and I can affirm, from repeated observations, that it will often be the means, and the only means, of saving your patient's life. Gentlemen, I am of opinion, that the division of retentions of urine into *complete* and *incomplete*, or *total* and *partial*, deserves to be regarded as truly practical—as a valuable and well-founded distinction, well calculated to put you upon your guard against taking a wrong view of particular cases. I believe, that if you examine the hypogastric region, and connect the fulness perceptible in that situation with other symptoms, you will rarely be deceived, whether the patient discharge a part of his urine or not. If corpulency should conceal the hard circumscribed swelling of the bladder, so manifest in thinner persons, you would of course follow the manifestly prudent rule which I have laid down for doubtful cases, and immediately pass a catheter. In fat subjects, I would also recommend you to introduce your finger into the rectum, where you will plainly feel the prominence of the distended bladder, and also a fluctuation, if, while your finger is applied to the prominence within the rectum, you tap briskly on the hypogastric region with the fingers of the other hand. This method, I should say, is particularly useful when the bladder is so thickened and contracted, that it does not rise above the pubes.

In these lectures I have invariably inculcated the maxim of always letting the treatment of diseases be guided, as much as possible, by the consideration of their particular causes, the removal of which must of course be a principal object in view. Now, retention of urine may depend upon a variety of causes, the nature of which entirely influences the prognosis and treatment; nor is it possible to

form any just opinions with regard to the treatment of this urgent disorder, without a constant recollection of the different circumstances concerned in its production.

The general indications are, first, to bring about, if possible, the discharge of urine through the natural passage, which object is sometimes accomplished by means of the warm bath, fomentations applied to the hypogastric region and perinæum; bleeding, opium, hyoscyamus, &c., and sometimes by the removal of mechanical obstacles to the flow of urine; but still more frequently by the skilful use of catheters. 2ndly. When all these means fail, it becomes necessary either to puncture the bladder or to have recourse to some other operation by which an outlet is made for the urine.

I may now, gentlemen, make a few general remarks on those very important instruments in surgery called *catheters*, some of which are of course designed for the male urethra, and others for the meatus urinarius. Another general division of them is into flexible and inflexible ones.

The *flexible*, or *elastic gum catheters*, as they are usually named, are now brought to great perfection, being made of many different sizes, to each of which a number is assigned. Some of them are of such a construction, that they will retain their curvature permanently, while another advantage is their being composed of materials, calculated to resist the warmth and moisture of the urethra a considerable time. It is only the best sorts, however, that are superior in this last respect. They are provided with stilets and wires, which give them the requisite degree of firmness, and the particular curvature needed at the period when they are about to be introduced into the urethra. Those employed by Mr. Brodie, as I have already apprised you, are furnished with firm iron stilets, and flat broad handles like those of common sounds, by which means the surgeon acquires a greater command over the direction and management of the beak. Elastic gum catheters, gentlemen, you know very well, are frequently the only means by which the lives of patients, labouring under retention of urine from different causes, can be saved, and they render this important service by accommodating themselves to the displaced and contracted state of the urethra, and admitting of being passed through a very small channel. While those of diminutive diameter are frequently the most advantageous for strictures, you will find that the larger ones answer best for retentions of urine arising from disease of the prostate gland, a fact already explained to you in a former lecture. Elastic gum catheters may be introduced either with or without the stilet, or, when partly introduced, their curvature may be suddenly increased by withdrawing the stilet at the same time that they are pushed further into the passage. Before you attempt to pass them, or any other instrument into the urethra, you are to smear them with a little sweet oil, so as to make their surface as smooth as possible.

Inflexible catheters are composed of silver, and introduced in the same way as a sound or staff, either with the convexity at first towards the pubes, succeeded by the *tour de maitre*, or with the concavity of the instrument always upwards, that is to say towards the pubes, or else with the handle kept in the first instance inclined towards the patient's left groin; a plan which Mr. Brodie follows, and which I often adopt myself. Whichever mode is followed, the catheter gets into the same position after its beak has reached the perinæum, and the *tour de maitre* has been practised in the first manner of proceeding. You have now to direct its beak through that point of the urethra encircled by the margin of the opening in the deep perinæal fascia, and, as soon as this is cleared, you should bring the handle of the catheter gently forwards and downwards, by which manœuvre the beak will be made to ascend through the membranous and prostatic portions of the urethra into the bladder. In this part of the operation, I advise you to aim particularly at keeping the beak of the catheter against the upper surface of the urethra, so as to avoid the risk of making a false passage. If you were to push the instrument forcibly and rudely towards the bladder, without depressing the handle at the proper moment, you would certainly rupture the canal.

Women are much less subject than the male sex to retention of urine, the meatus urinarius being short and capacious, not liable to stricture, or to those consequences which originate in the other sex from diseases of the prostate gland, and from abscesses situated near and pressing upon the urethra. Neither does the inflammation accompanying severe gonorrhœa in females lead, as it frequently does in the men, to a retention of urine.

Yet women are now and then afflicted with retention of urine, from causes very different from those which bring it on in the male sex. Polypi of the uterus, or vagina, ovarial dropsy, cancer uteri, displacements of the womb, especially that termed retroversion, and inflammation about the neck of the bladder after parturition, are the usual causes of the disorder in women.

With regard to the *introduction of the catheter in females*, it is a subject that will detain you only a few minutes. The catheter for females is much shorter than that for the male subject, and made with a very slight curve. It should be passed without subjecting the patient to exposure; you should hold the catheter in your right hand, and pass your left fore-finger between the nymphæ, and on the smooth surface between them, about three quarters of an inch below the clitoris, you will readily feel the papilla denoting the orifice of the meatus urinarius, into which you are to direct the instrument upwards with its concavity kept forwards. Here, gentlemen,

you have none of the difficulties, which are met with in the male sex from the length and curvature of the passage, the resistance of the deep perinæal fascia, the yielding of the membranous part of the urethra, the impediment formed by the prostate gland, or the spasm of muscles in the perinæum.

Men advanced in years are particularly liable to retention of urine. This is partly explained by their being remarkably subject to disease of the prostate gland, and partly by the bladder, after a certain period of life, losing some of its irritability and contractile power, so that it no longer retains the capability of lessening its cavity beyond a certain point. Hence the expulsion of urine in old persons is never complete, a portion of it always remaining in the bladder after each evacuation. At length, the infirmity increasing, the quantity of urine voided each time lessens; the desire to empty the bladder becomes more and more frequent, and, in the end, the urine only comes away by drops, or in a dribbling stream.

In this state the sufferings are not very great; the tumour, formed by the bladder above the pubes, is indolent, and, if compressed, you will often find that a certain quantity of urine will flow out of the urethra.

In fact, this is a case of *incomplete* retention; frequently as much urine is discharged in the twenty-four hours as is natural, but the bladder is never emptied. However, the symptoms are generally less urgent than in other examples, because this form of the complaint does not, like others, lead to a positive interruption or total suppression of the urinary secretion, or very often to a rupture of the bladder.

The weakened state of the bladder from age, it is scarcely necessary for me to observe, can never be removed; but when there is a greater tendency than usual to an accumulation of water, the use of the catheter should never be omitted, as it will afford immediate relief to the patient's uneasiness, and also prevent that degree of distension, which would terminate in vast disease and total paralysis of the bladder, if not in a rupture of it, and a fatal effusion of urine.

Then, gentlemen, you will meet with examples of *retention of urine from injuries and diseases of the spine and pelvis*, by which the bladder is rendered paralytic; cases noticed in previous lectures, and remarkable on account of the strongly ammoniacal quality of the urine soon noticed under such circumstances, and the propensity in the coats of the bladder to become softened and ulcerated. In cases of this description, the treatment should consist in the regular use of the catheter, in cupping the injured part, or bleeding the patient in the early stage of the case, followed up by purgatives and counter-irritation, as blisters, the moxa, or an issue.

Another *retention of urine, accompanied also by a paralytic state of the bladder*, does not depend upon any injury of the spine or pelvis, but altogether upon the detrusor urinæ muscle having suffered long and immoderate distension, in consequence of a previous accumulation of urine in the bladder from some other cause. Here, whatever benefit can be rendered, must be derived from the catheter, tonics, cold bathing, the exhibition of the tincture of cantharides, or the tincture of muriated iron, and the application of blisters to the region of the sacrum.

Then, gentlemen, with regard to *Retention of Urine from Inflammation in or near the Urethra*, it is often exemplified in cases of severe gonorrhœa, and in acute inflammations about the prostate gland and lower portion of the rectum. In all probability, when some practitioners describe a retention of urine, as arising from spasm or irritation, they would be speaking more correctly, if they were to refer the disorder principally to the effect of inflammation somewhere about the urethra or neck of the bladder.

When retention of urine proceeds from inflammation in the urethra or neighbouring parts, you should first try the effect of soothing antiphlogistic treatment, antimonial purgative medicines, bleeding, leeches to the perinæum, the warm bath, fomenting the hypogastric region, and the effect of hyoscyamus or the acetate of morphia. If these means prove unavailing, you must not defer the use of the catheter.

I have already told you more than once in these lectures, that *retention of urine sometimes proceeds from the pressure of collections of matter from the urethra*, and then the first indication is to discharge the abscess, and draw off the urine. Afterwards, with the assistance of antiphlogistic treatment, hyoscyamus, or opium, and the warm bath, or fomentations, the patient will soon begin to be able to discharge his water himself.

I once visited a case with Mr. Holt, a surgeon near Brunswick-square, which was attended with a complete and obstinate retention of urine arising from the pressure of an extraordinary mass of coagulating lymph effused in the corpus spongiosum, about two inches from the orifice of the urethra. The case was one of virulent gonorrhœa, accompanied by chordee. Here, bleeding, the warm bath, narcotics, the tincture of the muriate of iron, and leeches to the perinæum, did not supersede the necessity for the catheter.

Another *retention* arises from *fungous* and *carcinomatous diseases of the bladder*. Cancer is sometimes propagated to the bladder from the rectum or uterus. Here, the treatment can only be palliative, and the catheter is not to be neglected.

Amongst the varieties of *retention, I must not omit that which depends upon foreign bodies in the bladder*, whether hydatids, coagulated blood, worms, or calculi, which may obstruct the passage of urine from the bladder into the urethra, or through the latter tube.

Here the cure depends upon the removal of the substances causing the obstruction. Worms, hydatids, and coagulated blood would require the bladder to be washed out with a syringe and catheter of the largest size, or with the kind of tube used in lithotomy for letting the fragments of stone pass suddenly out with the fluid contained in the bladder.

In cases of worms in the bladder, turpentine promotes their discharge in a powerful manner; and, what is very remarkable, gets into the urine contained in the bladder in a very few seconds after it is swallowed; a proof of which I find in the particulars of an unique case of tænia in the urinary bladder, sent me by Mr. Law, of Penrith, Cumberland, under whose care the patient now is. The immense number of pieces of tænia discharged in this singular case from the meatus urinarius at different periods, you have been enabled to form some conception of by the specimens shown you in a former lecture. Calculi, either in the urethra or bladder, not above a certain size, may be removed with the urethra forceps, sometimes without an incision in this canal, sometimes with it.

In children, one kind of *retention* is produced by the diminutive size of the orifice of the prepuce, or a congenital phymosis, as it is termed. In such a case, sometimes, the prepuce is distended by the urine into a large pouch, from which it escapes slowly and difficultly. Instances of urgent danger from such a cause are given by Petit.

I will next make a few observations on *retention of urine from strictures in the urethra.* You are, perhaps, aware, that a difference of opinion exists about the right principle of treatment of such a case. Most surgeons begin with an antiphlogistic soothing plan, and try the effect of the warm bath, fomentations, bleeding, leeches, aperient medicines, hyoscyamus, acetate of morphia, or opium, given by the mouth, or in clysters. This is not, however, the practice universally preferred, and many surgeons act differently. Thus, instead of the method adverted to, Mr. Brodie, in a case of this nature, takes one of the smallest gum catheters, which has been kept for a considerable time on a curved iron wire, and which consequently will retain its curved form after the wire is withdrawn. He introduces it without the wire, and keeps the concavity of the catheter towards the pubes, elongating the penis at the same time. The instrument will then be likely to pass the stricture and enter the bladder, the urine to flow out in a fine stream, and the patient to be instantly relieved.

If this plan fail, you may imitate the gentleman whom I have mentioned, and try a small catgut bougie. Introduce it as far as you can, then elongate the urethra by drawing the penis forwards, and the bougie will often pass. Certainly, as Mr. Brodie has observed, it is not necessary that it should pass into the bladder, if it enter the stricture that is sufficient; then let it remain there, until there is a violent effort to make water, when it is to be taken out, and the urine will frequently follow it.

If this expedient should not answer, take another small catgut bougie, and bend its point upwards before you introduce it, by which means you will be enabled to keep its point against the upper surface of the urethra, and to avoid the lower, where the obstruction is mostly, if not always, the greatest.

When the catgut bougie will not succeed, a *silver* or an *elastic gum catheter*, mounted on a firm iron stilet, will sometimes pass. When the stricture is recent, the catheter should be of nearly the full size of the urethra; but, if the stricture is of long standing, the instrument should be considerably smaller. Mr. Brodie prefers one that is shorter and less curved than usual; and if it is made of silver, he advises the tube to be fixed in a wooden handle, which will enable you to direct its point more delicately and with greater effect. If you use an elastic gum catheter, the iron stilet should have a handle like that of a common sound. The rules and advice, given by Mr. Brodie on these matters, appear to me particularly valuable. You are to pass the instrument as far as the obstruction, and then having withdrawn it for about half an inch, you pass it on again towards the bladder, keeping the point against the upper part of the urethra. Employ no violence; for, if you tear the urethra, you will not succeed. I recommend you to keep up steady and moderate pressure against the stricture for a little while, and then perhaps it will begin to relax or yield, and the instrument will enter it. If a gum catheter has been used, leave it in the urethra for a day or two, which will have a great deal of effect in curing the stricture entirely. Even if you do not succeed in getting an instrument into the bladder, the pressure employed may still do good, by bringing about a relaxation or yielding of the stricture, and on the instrument being withdrawn, a stream of urine may follow it. Experience confirms the frequency of such occurrences, and, if they can be brought about, you extricate your patient from his urgent state of danger, as well as from the torture which a retention of urine from this cause necessarily subjects him to.

Now supposing you were not able, in a case of complete retention of urine, to relieve the patient by the catheter, or any of the other plans, which have been specified, and the bladder were to continue distended beyond a certain time, either that organ, or a portion of the urethra behind the obstruction in it, would give way, and the urine be extravasated in the cellular membrane. Thus either a rapid and fatal inflammation, involving the peritoneum, would be excited, or extensive abscesses and gangrene of the cellular tissue of the scrotum, perinæum, and interior of the pelvis be the consequences. In such unfortunate cases, you will observe that the urine does not gravitate

to the thigh or nates, but spreads over the scrotum, penis, the groins, and even higher up towards the navel and loins. The reason why it does not pass towards the nates is, that it is stopped by the perinæal fascia. When the urethra gives way, you will generally notice at first a small induration in the perinæum, which is rapidly converted into a dark, livid, extensive, and quickly spreading tumour of the scrotum, groins, and parts in the perinæum. Nay, sometimes the effusion of urine ascends, as I have told you, far above Poupart's ligament. Now wherever the urine passes, it is sure to produce gangrene, and sometimes the whole scrotum sloughs away, leaving the testes hanging by the spermatic cords, totally destitute of their natural coverings. Here, gentlemen, I wish to impress on your minds the important fact, that the only way of preventing such evils, I mean those of effusion of urine, is to procure, in some way or another, an outlet for the urine from the bladder previous to its rupture, or that of the urethra.

In stricture, this may generally be accomplished by making an incision into the membranous portion of the urethra behind the stricture, which part of the canal is always dilated into a sort of tumour, by being distended with the urine forced thus far by the bladder.

In prostate gland cases, attended with urgent circumstances, you must either convey the catheter into the bladder, through the tumour, by a combination of skill and well directed force, or you must puncture the bladder above the pubes.

But, gentlemen, if urine is already effused, be sure to make free and deep incisions for its escape, and, if you cannot pass a catheter, never neglect, in a case of stricture, to open the membranous part of the urethra, so that the urine may have a ready outlet.

With regard to the operation of *puncturing the bladder*, I may say, that it is not so often done at the present day as it was thirty or forty years ago; and the reason of this fact is, that the treatment of diseases of the urethra is now more skilfully and scientifically conducted, so that retention of urine is generally relieved by milder plans. When the operation is necessary, however, there are three situations in which the puncture may be made, namely, 1st, above the pubes; 2ndly, within the rectum; 3rdly, in the perinæum.

In retention of urine, the bladder rises towards the umbilicus, carrying with it the peritoneum, and leaving a considerable space above the pubes, where that membrane is generally believed no longer to intervene between the bladder and the abdominal muscles. Here, in the lower portion of the linea alba, a trocar may be introduced into the bladder, without risk of wounding the peritoneum. This is the common opinion, though I may state, that its accuracy is denied by Mr. King, who maintains, that in the puncture above the pubes the peritoneum is pierced twice, in consequence of its not being carried up, and separated from the fascia transversalis by the distended bladder, as commonly, but, as he says, erroneously, imagined. The fact can only be determined by the examination of the bodies of persons who die after the operation. You are to make an incision, an inch and a half or two inches long, just above the symphysis of the os pubis, at the lower part of the linea alba. You then carry it a little more deeply between the pyramidales muscles, when you will feel the prominence formed by the distended bladder. Into this prominence, then, pass the trocar, taking care to direct its point not too much downwards, but in a line directed towards the base of the sacrum. The trocar being now withdrawn, the urine flows out of the canula. In a couple of days an elastic gum catheter, shortened, may be introduced, and the canula withdrawn. Many practitioners, indeed, pass a piece of elastic gum catheter at once through the silver tube into the bladder, and take out the latter instrument. But I think the plan is attended with some risk of the urine becoming effused, and I would not advise you to remove the silver tube, which fills up the puncture completely, until the cells of the cellular tissue have had time to be closed with lymph: this will be in about forty-eight hours. You must now aim at removing those causes, whatsoever they may be, which prevent the urine from passing through the urethra. The puncture of the bladder above the pubes is to be preferred whenever much disease exists about the neck of the bladder, or the prostate gland is enlarged. In a very corpulent subject, however, it should be avoided, if another mode is eligible.

The *puncture from the rectum* is performed in the centre of the triangular space bounded on each side by the vasa deferentia, as they converge towards the prostate, and above by the cul de sac, or reflection of the peritoneum, where it passes from the bladder to cover the upper part of the rectum. This cul de sac is nearly an inch behind the prostate, and on the upper or anterior surface of the rectum; a fact highly necessary to be remembered, because if you pass the point of the trocar too high up the rectum, you wound the cavity of the abdomen. A curved trocar is most convenient for this operation, and the patient is to be placed in the same posture as for lithotomy. The surgeon having dipped the fore and middle fingers of his left hand in oil, now passes them into the rectum, and having distinctly felt the distended portion of the bladder, just behind the prostate gland, he introduces the curved trocar, with its concavity upwards, along the space between the two fingers of his left hand, and pushes it into the bladder, taking care at the moment to depress the handle, so that the point may not pass too much backwards and upwards. Were the latter caution not observed, you might wound the peritoneum, or the instrument slip between the bladder and rectum,

without letting out the urine at all. The canula should be fixed in its place for a day or two, and then removed altogether. As far as the parts wounded in this method are concerned, I should say, that it is the mildest plan; but the irritation of the rectum by the urine has been known to bring on vast inflammation and serious degrees of ulceration and sloughing, so that the method has not received the approbation of Sir Astley Cooper. Such evils, however, do not appear to be very frequent; and I should prefer this mode of operating generally where the prostate gland is free from disease, and the cause of the retention is not about the neck of the bladder.

As for the puncture from the perinæum, it is almost entirely relinquished by modern surgeons. If you choose to practise it, put the patient in the same posture as for the lateral operation for the stone; make an external incision, like that adopted in lithotomy, though not so extensive; dissect down by the side of the prostate gland, until you feel a part of the distended bladder, into which the trocar is to be pushed between its neck and the insertion of the ureter. It is scarcely requisite to observe, that this operation is more difficult to the surgeon, and more severe to the patient, than the others which I have described.

Gentlemen, the lectures which have now been delivered, including five or six given in the morning, for the purpose of showing operations, have not been less, I think, than about one hundred and seven; a number fully equal to, and probably greater than, that of the surgical lectures of any other public school. In the hope of communicating useful instruction, I have indeed trespassed on your patience more than may have been right. The time given up to this task, however, has enabled me to bring under your consideration nearly all the most interesting parts of surgery, and to explain the leading principles of this indispensable branch of medical science. In truth, I have been more anxious to make you understand those principles, than to fatigue you with details, which either the knowledge of principles spontaneously suggests, or the common routine of the wards of a hospital more conveniently embraces. Had the time permitted, I should have entered into the consideration of some diseases about the anus and rectum; but the advanced period of the spring calling many of you into the country, and the immediate arrival of the days fixed upon for examinations and the distribution of prizes, compel me to omit that subject, which, however, I advise you to study as one highly deserving of the attention of the practical surgeon.

My labours having thus terminated, it becomes me to express, not simply my thanks for the attention and respect, with which you have invariably listened to my humble endeavours to convey just views of practical and scientific surgery, but the heartfelt pleasure with which I have noticed your exemplary conduct throughout the session. The zeal and intelligence, indeed, which many of you have displayed, afford unquestionably the best promise that can be given of future success and eminence. But, gentlemen, in order that the hope, thus excited in my bosom with respect to your prosperity as members of the profession, may be realised, let me caution you not to suffer your industry to be checked, or your ardour to be damped by the difficulties always attending the commencement of a professional life. In particular, be not disheartened by seeing so many competitors in the field, and every post of honour and emolument already filled. A few years will sweep away those who now enjoy public favour and have the benefit of lucrative appointments; a new and more cheerful prospect will then be presented to your view; and some of the great prizes must of necessity devolve to you, as constituting a part of the rising generation of a profession, whose services the community can never dispense with. Do not flatter yourselves, however, that such of you as relax in your efforts to attain distinction will meet with future encouragement as a matter of course; on the contrary, rely upon this truth, that only those individuals who distinguish themselves as scientific, gentlemanly, and honourable practitioners, can have any chance of obtaining those high rewards, to which I have alluded. Superior knowledge alone, even surpassing talents, without upright principles, I will take the liberty of saying, will never lift a man to the pinnacle of the surgical profession in England, where no individual can be truly respected in any line of life, who is known not to be strictly obedient to the principles of honour and virtue. In order, then, to have a fair prospect of shining and being esteemed in your profession, you must let your medical skill and knowledge never be disjoined from those sacred principles, which will teach you to act on all occasions with sincerity and benevolence, as well towards your professional brethren, as towards your patients. With this advice, gentlemen, I take leave of you, perfectly convinced, that, whatever stations you may fill in the profession, you will acquit yourselves in a manner calculated to reflect credit on the Medical School of the London University.

ST. THOMAS'S HOSPITAL.

A remarkable Case of Neuralgic Disease simulating Chorea and Hysteria.

COMMUNICATED BY A CLINICAL CLERK OF DR. ELLIOTSON'S.

A GIRL of respectable parents, aged 12, was sent to this hospital by her friends to be treated for a peculiar affection, which for thirteen months she had been suffering from in the greatest agony. Before this period her friends

stated she had been in perfect health. At first she was attacked with the influenza, which subsided to the usual remedies, but a month or two afterwards she again became the subject of this disease, when obstinate costiveness ensued, and by aperient medicines only one stool could be procured in two or three days, and this was accomplished with excessive pain. These attacks of pain, after every alvine dejection, gradually increased in urgency; her urine, which, up to this time, she had passed naturally, but had observed for some days that it had become more scanty, was now also accompanied with pain. One morning (according to the statement of her friends) after having been in the water-closet, she was seized with spasms of the abdomen, cramps, twitchings of the arms and legs, accompanied with wringing and clapping of the hands, at the same time suffering excessive torment, especially in the vesical region, her countenance indicating the greatest agony. These attacks at first returned at intervals of longer or shorter duration, and when absent she was perfectly free from pain, and at times appeared in a comatose state. About 12 o'clock P.M. this apparent calm generally came on, and usually continued for an indefinite period, sometimes for twenty-four hours, but oftener subsiding about seven or eight in the morning, when the severe paroxysm of spasm, &c. came on as before. These symptoms remained, with very little variety, until about three months ago, when she became the subject of a similar attack, but the symptoms attending it being of greater severity; since which time she has been unable to void her urine only once in the twenty-four hours. She has complained of occasional pain and uneasiness in the back part of the head, and towards evening has usually been hot and feverish.

The above is the account given by her friends, who also stated that several medical men had seen her, and had prescribed for her many times, without the least alleviation to her symptoms. When admitted on the 12th of July the attack came on about 6 o'clock in the morning, as her friends had described, and continued till about 12 o'clock at night; but for the first few minutes after she awoke, which was always precisely at the same hour, she was obliged to sit up in the bed; she would for a short time keep her body flexed forwards, her hands on the pubic region, with her legs hanging to the side of the bed, incessantly moaning from excessive pain; when, as if from a sudden electric shock, she would press her hands with much force on the genital organs, and, with a sudden dart, throw herself on her back on the bed: the former position she would immediately resume, and the latter in a few seconds ensued, at which time her thighs were brought to the abdomen, and the legs flexed upon the thighs. These motions continued at first only for a few minutes, during which time she was in perfect possession of her intellectual faculties; this was succeeded by a complete state of tremor, sitting still upon her bed, but now with her body nearly erect, the whole frame being in a complete state of agitation, forming an incessant elevated and depressed state of motion, suffering from excruciating agony. After continuing in this condition for about an hour, these movements suddenly changed, and she went off in her former state of spasmodic action, in which condition she continued till about 12 o'clock at night, without a moment's repose. She was much emaciated, apparently of scrofulous diathesis, and her countenance was expressive of the greatest pain, which principally was confined to the hypogastric region. The whole of her abdomen was tender on pressure, exceedingly tense, and yielded on percussion a tympanitic sound. Her bowels, on the first two days of her admission, remained confined, and once a day (in the evening) she passed her water; this caused excessive agony, but the secretion had a perfectly healthy appearance. Tongue was slightly furred, pulse 112, and soft. The cause of this strange affection remained in great obscurity; the parts of generation were carefully examined, but nothing abnormal could be detected; the clitoris, however, was a little larger than natural, and placed below the urethra; a catheter was passed, with a view of ascertaining if there was any abnormal state of the internal coats of the bladder, but no disease could be discovered. She was examined per vaginam, and per rectum by Dr. Elliotson, Mr. Green, and Dr. Rigby, without any further detection of disease, but the colon was found clogged with lumpy feculent matter. Believing the disease to be purely neuralgic, Dr. Elliotson prescribed the æthereal tincture of the lobelia inflata, five minims of which she took every second hour out of some peppermint water, and had a bran poultice kept constantly applied to the abdomen, and, to keep up gentle action of the bowels, fifteen grains of rhubarb were prescribed; this not being sufficiently powerful, an enema of castor oil was administered.

Up to the 20th, she continued to take these medicines, the tinct. lobel. inf. æther. had been increased up to thirty minims every two hours, and the paroxysms continued without the slightest alleviation to her sufferings. Regularly at 12 o'clock at night she falls asleep, in a complete state of exhaustion, and remains so till between six and seven in the morning, when she is awakened by the pain and spasm. Her bowels have been open since the second day of her admission, regularly once in the twenty-four hours.

On the 22nd Dr. Elliotson prescribed a quarter of a grain of the muriate of morphia every second hour, and ordered an injection with tincture of opium; also some æther to be rubbed over the region of the bladder in the evening, with a draught composed of five minims of the liquor potassa, with syrup of poppies, to ease, if possible, the pain in mic-

turition. In spite of every medicine prescribed for her, which consisted of opium, zinc, croton oil, &c., the symptoms remained, on the 4th of July, exactly the same as when first admitted. Her bowels had been open several times a day from the croton oil, and after every dejection her agonies were much increased. The fits continued quite as violent as ever; but what was very remarkable, when spoken to, so that her attention was detracted, the spasmodic action for a few hours ceased, her moaning instantly lessened, and she would enter for a few moments into conversation, but immediately return to her former state. A grain of the muriate of morphia was now given every morning, and an ointment composed of a scruple of veratrine, a dram of olive oil, with three drams of lard, was rubbed on the region of the hypogastrium daily. Her appetite had since her illness been very bad, and the most she took was about a pint of milk, with two eggs daily. The strength of the veratrine ointment was gradually increased, but not the least effect was produced from its use, and the muriate of morphia was increased to two grains and a half every morning. By the 15th of July, if anything, the symptoms were slightly alleviated, the fits were not so violent, although incessant, but always appeared aggravated when any one noticed her. She had had from the commencement a constantly dilated pupil, and complained of dizziness before her eyes; at this time there was not so much dilatation of pupil, but still great dulness of the eyes. On the 18th the muriate of morphia was increased to three grains, but, instead of giving it every morning, she took it every night before the cessation of the paroxysm, and she continued to have injections composed of ℥j. of confection of rue, ℥j. of spirits of nitre, with a pint of assafœtida mixture, which had been prescribed for her since the 1st of July. By the 22d of July, she certainly appeared better; and the following was her condition:—Much pain in discharging her water; pain after discharging her motions, but nothing so severe as when admitted; the paroxysms of agitation of less duration, lasting only half an hour, both preceded and succeeded by the flexed state of the body; the hands still kept on the pubic region, the pressure of which appeared increased, at the moment a sudden spasm made her dash backwards, but these paroxysms were not so violent as before; the emaciation had not increased; her countenance was not so indicative of great distress; and her appetite was improved. These symptoms I think it right to mention, as at this time, on the 22d of July, a new medicine was administered, after the use of which she made such rapid progress, as the progression of the case will verify, but yet the results of the cure must remain doubtful to every reader. One drop of the créosote was prescribed by Dr. Elliotson three times a day, all the other medicines were discontinued to try the efficacy of this medicine in this mysterious affection. On the 23d it was increased to two, on the 25th to three, and on the 29th to five minims three times daily; by this time there was much alteration, the paroxysms of agitation had entirely ceased, and the others had become so much mitigated that the child was able to work and talk with the other patients in the ward; the pain in the region of the bladder had nearly gone; she gained flesh; her countenance lost all indications of distress; pain in voiding her water nearly ceased; and now a smile could be procured from her before anxious countenance. On the 1st of August the créoste was increased to five minims, on the 5th to six, and on the 8th to seven minims three times a day. The paroxysms had now entirely ceased, but were still slightly brought into action, when a medical man approached her; however in a few more days the paroxysms entirely abated, she ate and drank tolerably well, and was able now to walk in the square of the hospital. On the 14th Dr. Elliotson allowed her some fish; her health has continued to improve; she has taken the créosote regularly three times a day; and now, up to the 22d of August, she is quite free from pain, and gaining fast her health, flesh, and spirits.

Whatever might have been the proximate cause of this affection, it appears evident, that it was purely a neuralgic disease, though there is some difficulty in defining its exact seat. The pain throughout her illness was principally confined to the parts connected with the pelvic cavity, especially to the bladder and rectum; and in the latter either the cause or effects of the disease first manifested itself. Could such an obstinate inaction of the alimentary canal produce these symptoms by retention of fæcal masses in the sacs of the colon? it appears evident that it might: but then, so frequently do we find cases, in which the bowels have not been opened for many days, without any such symptoms supervening, and one still stronger argument against it is, that after her bowels had been freely opened by croton oil, the symptoms remained unalleviated. In this case then, we may naturally believe, that the costiveness originated, merely, as an effect of the disease, and that the exciting cause was produced from debility, arising from the influenza, from which she had been previously suffering. Debility is generally admitted, especially when suddenly produced, to be the exciting cause of many nervous diseases, such as chorea, hysteria, &c.; and from the combination of the symptoms of this affection, it is evidently a variety of these two affections; which diseases are well known occasionally to co-exist. However, as the proximate cause of chorea is generally believed to be an irregular transmission of nervous fluid to the motory fibres of the muscles that constitute its seat, it will not well explain the symptoms attending this disease; for in this case the nervous energy, though perhaps not abundantly, was regularly supplied, which was

influenced by the power of the will over the affected muscles, when spoken to, for if in the midst of the most violent paroxysm it for a time instantly ceased. As, however, at present we know nothing of the nervous power, we must expect great difficulty in even tracing its effects, though we cannot but conclude that it is secreted by the brain and its connexions, and consequently the qualities of the secretion must vary according to the state of the gland producing it; and if we reason by analogy from the other secreting glands of the body, it is rational to conclude also as to its power, from the different morbid conditions of the organ. If this be admitted, of course neuralgic diseases must vary according to the secretion produced, and, however this be effected, may be irregularly distributed, as well by precipitation as by interruption. Knowing then the immense power of the nervous secretion over the animal frame, we need not be surprised as to the numerous varieties of disease produced. Several remarkable cases are on record; but the most extraordinary that has ever been related, is one spoken of by Dr. Watt, in the fifth volume of the Medico-Chirurgical Transactions, and which in some points resembles the one above reported; the following is an extract of the paper read by Dr. Watt to the Society, February the 1st, 1814:—

"We are informed by Horstius, that some women, whom he describes as being disordered in their minds, and affected with a peculiar kind of restlessness in their bodies, repaired once a year to the chapel of St. Vitus, near Ulm, and continued there night and day leaping and dancing till they were so exhausted as to drop down almost dead. Thus," continues he, "they were restored and continued well till the following May, when the same propensity returned, and required a similar course of exercise to remove it. From this tradition, the convulsive disease to which children are liable is said to have derived its name, and though considerably different in their phenomena, yet the two affections are perhaps nothing more than different species or varieties of the same disease. Having lately had an opportunity of seeing one of these restless patients, I was induced to take the following notes of the case, which I now beg leave to submit to the Society.

"But before proceeding, I may remark that there appears evidently to be several species or varieties of this disease, all of them characterised by an ungovernable propensity to motion, and all of them removed or mitigated by particular kinds of muscular exertion. A disease of this kind occurs frequently in the northern parts of Scotland, and is described in the following terms:—'Those affected first complain of a pain in the head, or lower part of the back, to which succeed convulsive fits, or fits of dancing at certain periods. During the paroxysm they have all the appearance of madness, distorting their bodies in various ways, and leaping and springing in a surprising manner, whence the disease has derived its vulgar name *leaping ague*. Sometimes they run with astonishing velocity, and often over dangerous passes, to some place out of doors, which they have fixed on in their own minds, or perhaps even mentioned to those in company with them, and then drop down quite exhausted. At other times, especially when confined to the house, they climb in the most singular manner. In cottages, for example, they leap from the floor to what are called the baulks, or those beams by which the rafters are joined together, springing from one to another with the agility of a cat, or whirling round one of them with a motion resembling the fly of a jack.' Cases of this kind seem to differ in their periods. Some of them are annual, as those described by Horstius; some of them are irregular, as those in the northern parts of Scotland, and some of them daily or oftener, as in the case I am more particularly to describe. They differ also in the kind of motion performed. In some it consists of every species of exercise that can be conceived, as running, leaping, dancing, tumbling, &c.; in others it consists of a simple repetition of the same thing. In some it appears to be accompanied with symptoms of a convulsive nature; in others the motions appear to be completely or nearly voluntary. Perhaps they differ, too, in point of age, sex, and various other conditions; but these circumstances seem to be less ascertained. Females, however, are naturally more liable to this affection than males, and of the former, chiefly those below the age of puberty. The mind in all cases is probably more or less affected. The first case is that of Mary Wardrop, aged ten years. This patient was originally rather delicate, but of a lively active disposition, and an exceedingly good scholar for her age. It was remarked towards the end of the year 1812, that she was not quite so lively, and looked somewhat paler than usual; but these symptoms were so mild and transitory as not to excite any degree of attention. On the 1st of January, 1813, she was seized with most excruciating headach, accompanied with almost incessant vomiting. Both of these occasionally suffered a slight abatement, but in the intervals she seemed sick and oppressed, and moaned heavily. She required her body to be kept always in a perfectly erect posture. If even the head was allowed in the slightest degree to recline backwards or forwards, or to either side, it increased the pain so remarkably as to render it intolerable. She never lay down till completely exhausted, and at the very point of falling asleep; and, on awaking, she instantly started up, and remained all the rest of the time in an erect posture. These symptoms continued four weeks with little variation, but during that time she lost both the power of speech and of walking. About the beginning of February, she was seized

with a propensity to turn round upon her feet like a top, with great velocity, and always moving in one direction. This motion was continued from morning till night, and required the constant attention of her friends to keep her from falling. Sometimes her tongue was moved very rapidly backwards and forwards; but this appeared to be voluntary and not convulsive. She was always quite sensible; and during the continuance of this motion the headach was much abated. She complained of nothing, except when interrupted in her incessant motions. She seemed to feel relief, and expressed her satisfaction, when the attendants enabled her to turn round with still greater velocity than she could by her own efforts. About the end of February the motion ceased, and the headach returned with violence. At this time, she requested some of her friends to press her head in the most forcible manner, and this appeared to give her some relief. After the violent headach had continued about two weeks, she lost entirely the power of the muscles of her neck, so that the head, when not supported, fell backwards, forwards, or to whatever side the body happened to be inclined. The headach began now to abate, and she recovered her speech so far as to be able to utter a few words so as to be understood; but in the end of March she was seized with a new sort of motion, and again lost her speech. She now laid herself across the bed, and, turning round like a roller, moved rapidly from one end of the bed to the other. But as she turned always in one direction, when she arrived at this point she found it difficult to continue the rotatory motion with that rapidity which she wished. As this circumstance gave her considerable uneasiness, and as her attendants had seen the relief she seemed to experience from assisting her in her former motions, two of them, one at the head and the other at the foot, lifted her regularly from the foot up to the head of the bed, from which she rolled down, and was again lifted up.

"The fits continued for about two hours each day, but, gradually increasing, they came to occupy six or seven. The assistance she required being of a very fatiguing nature, and the attendants, seeing no end to it, determined to give it up altogether. This distressed her very much, but still she persevered, and came at last to turn round without moving out of the place. The friction produced in this way was so great, that she would wear out a stout calico night-gown to pieces in a single day. On one occasion they took her out to the garden, where she rolled rapidly from one end of the walk to the other. At another time she was carried out and laid in a shallow part of a river, where she was nearly covered with water. In place of making any effort to get out of the water, where she was almost at the point of being drowned, she began to turn round in the same manner as if she had been in bed. At another time, a large bucketful of cold water was dashed suddenly and unexpectedly on her head and body while turning in bed, but with no better effect. Though entirely wet, she continued her motions till the usual period. What seemed most extraordinary in this movement was, that she made little or no use of her arms in turning; indeed, they were often rigidly extended by her sides, as in a case of tetanus. Sometimes the whole body became so stiff, as to put almost an entire stop to the motion; but when this went off, which it always did instantaneously, the rolling became as rapid as before. She occasionally seemed to experience considerable difficulty of breathing, and would sometimes turn round from twelve to twenty times without inspiring. What appears incredible, but which can be confirmed by hundreds who saw her, is, that even when left to herself she would have revolved from fifty to sixty times in a minute, and have continued to do so for the length of time stated, except when retarded by the tetanic rigidity of the body. She continued this for six weeks. About the end of April, she was seized in a different manner. She now lay on her back, and, by drawing her head and heels together, bent herself up like a bow, after allowing them to separate, her buttocks fell with considerable force on the bed. She lay extended on her back for a moment, and then repeated the same thing, and continued to do so at the rate of ten or twelve times in a minute, for six hours at first, but, gradually increasing, she at last continued it for fourteen hours a day. This motion continued for about five weeks, and was succeeded by another entirely different. She was then seized with a propensity to stand on her head in the following manner:—resting upon her knees and elbows, she placed the crown of her head a little farther down in the bed than the pillow; she then elevated the trunk and lower extremities directly to the roof of the bed, and rested her weight partly on the occiput, but chiefly on the nape of the neck and shoulders, the chin touching, and seeming rather to rest on the top of the sternum; as soon as the body was elevated in this manner, all muscular exertion seemed to be withdrawn, and it fell down as if dead, the knees first striking the bed, and then the buttocks striking the heels. This was no sooner done, than she instantly mounted up as before, and continued to do so from twelve to fifteen times in a minute, for fifteen hours a day. Such was her state when I first saw her, early in the month of June. The previous history of the case was obtained chiefly from her father, an intelligent and respectable farmer, in Ayrshire, a man above the most distant suspicion of any thing like superstitious credulity, fraud, or deception. Previous to this she had been seen occasionally by Dr. Steel, of Kilmarnock, and some other medical practitioners. Dr. S. advised the parents to send her to Glasgow, and furnished them with a letter to Dr. Cleghorn and myself, requesting us to examine the case, and

also to call in such of our medical acquaintance as we might think proper. Dr. C. and I happening to be both out of the way at the time of her arrival, she was conveyed to the Royal Infirmary, where she remained for a day and a night, and was seen by a number of medical gentlemen. Here she began and continued her motions in the same manner as she had at home. The day following she was removed to the house of a relative in town, where she continued for two days and nights, during which time I had several opportunities of seeing her, and making a variety of inquiries, along with Dr. C. and several other medical gentlemen. Our first visit was in the middle of the day. We were told that she commenced at a precise hour in the morning, and continued till night, that even then she could not stop of her own accord; but, by holding her for a few minutes very firmly, the propensity went off, and she became quiet. She was then prevailed on to take a little food, went to bed, and slept pretty soundly. In the morning she had a little food in the same manner, and at eight precisely the motions commenced.

My second visit was at eleven o'clock at night; she was then going on as we had seen her. One difference, however, was pretty obvious. In the earlier part of the day she elevated both limbs equally, or nearly so, and each time pointed them directly to the roof of the bed. In the evening the left limb was elevated more feebly, and fell considerably short of the perpendicular. We were told that this difference in the two limbs was scarcely perceptible in the morning, but increased gradually towards night. Some evenings the left limb was not elevated above half way between a horizontal and perpendicular posture. The hour was now come for putting a stop to the motions. Her father, applying a hand to each side of the chest, lifted her suddenly from the bed, and, sitting down, placed her on his knee, and held her fast. For a few minutes, perhaps from five to ten, she struggled very violently, like a child in a passion, forcibly held against its will. The struggle gradually subsiding, she became composed, sat still, and received a little food. The manner of giving the food was to break down the bread into small portions, and put it into her mouth. She fretted every time it was presented, and though she opened her mouth, it was with obvious signs of reluctance. She chewed it with a sort of convulsive rapidity, and swallowed it as a child would swallow a dose of physic.

"Her food was chiefly a few bits of oatmeal cake with a little butter, cheese, or ham, and a small quantity of milk. She never took either food or drink except at this time, and immediately before the motions commenced in the morning. I have mentioned the manner in which a stop was put to the motions in the evening. While we were present in the earlier part of the day, at the desire of some of the medical gentlemen present, a similar attempt was made. Her father took her up, and held her firmly in his arms, during which she continued to struggle with a degree of fury and desperation, which I would compare only to the rage of the wildest animal I had ever seen held in a similar manner. The attempt was made for a considerable time, but with no abatement in her struggles for liberty. Indeed her father told us, that, on former occasions, it had been tried for a much longer period, and accompanied with threats and even harsh usage, but without effecting any sensible change. After the period at which her motions were to cease, was ascertained, it was thought advisable to try whether, by making it a few minutes earlier each night, the time might not be materially shortened. An attempt of this kind was made a little before she was brought to Glasgow. The first night she was taken up ten minutes earlier than the night before. She struggled a little harder and longer than usual, but at last became composed. The next night another ten minutes were taken off, but she struggled as if she had been taken up in the middle of the day. After continuing the contest for almost an hour without any prospect of success, she was laid down, when she instantly began her motions, and after continuing them for about two hours, she was again taken up in the usual way, and became quiet, but did not recover entirely her ordinary degree of composure through the whole night. It was next suggested to allow her to go on till she stopped of her own accord. This experiment was tried a short time after the former; she was first allowed to continue her motions three hours later than usual, after which she did not sleep till she began again in the morning. She continued all the next day and night, till within an hour of the time when they usually came on in the morning; she was then stopped, having neither tasted food nor drink for twenty-four hours. After taking a little food, as usual, and appearing as if she would have fallen asleep, at the precise time the propensity returned, and she continued her motions for other fifteen hours, without intermission, and without the least apparent fatigue, more than usual, at which time she was stopped in the usual way, took a little food, and went to rest. My next visit was in the morning between seven and eight. I found her seated upon her father's knee; she seemed composed, but so timid that I could hardly obtain a sight of her face, and on the least attempt to obtain a sight of her tongue, or of her eyes, she became greatly distressed and agitated. Her pulse was pretty regular, and about ninety in a minute, but she would hardly allow us to feel it distinctly. Her eyes, so far as I could discern, appeared clear and lively.

"After these examinations the conversation turned upon something else, and nobody seemed to be paying any attention to her; but, a few moments before the expected attack, she began

to show signs of uneasiness. She moved her head in various directions; a distortion of her features seemed to indicate a considerable degree of internal agony; her lower extremities, too, suffered occasional spasmodic contractions, and now and then convulsed twitchings and startings. At last, as if terrified out of her senses, or in a fit of desperation, she began to grapple and struggle with her father, in the same manner as when he attempted to lift her out of the bed the day before. He now threw her gently on the bed, when she instantly got up on her hands and knees, and after an adjustment or two, placed her head in a proper position, and began to throw up her body and limbs as I have already described. For a short time she appeared to be hurried and agitated, but after, in about a quarter of an hour, she went on in the most cool and deliberate manner. She seemed to pay attention to nothing; but this was not really the case, for if anything was said with regard to herself, such as the giving her medicine, and still more particularly any proposal to stop her motions, she instantly began to whine and fret.

"The precision with which she began at a particular hour in the morning appearing to some people very extraordinary, a variety of attempts was made to find out the cause. The clock was sometimes altered, and sometimes stopped altogether. On other occasions the light of day was excluded, and candles kept burning as if it were still night, but none of these stratagems seemed to have the least effect in altering the periods.

"It was their general practice to awaken her about an hour before the expected attack, if she did not awake spontaneously, which was for the most part the case. This was done that she might have time to take a little food. They were advised not to awaken her, to see if she would some time or other oversleep herself. One day she did not awake till within a few minutes of the hour, and her awaking then seemed to be in consequence of the uneasy premonitory symptoms coming on. At the precise time she began her motions as usual, and continued till the ordinary hour in the evening, without taking either food or drink.

"In some of her former motions she appeared to be much hurried and agitated, but in the present paroxysm, when left to herself, she went on in the most cool and deliberate manner, like a child playing at its ease.

"From the time she began the present species of motion, there was always one or more persons beside her. It was suggested to try what effect it would have to leave her alone. This experiment was tried some time before she came to Glasgow. Without any previous notice all the attendants slipped out of the room and left her. It was some time before she seemed to miss them. She was then seen to look about, but continued her motions. After some time, finding the room still empty, she stopped for a minute and looked round her; she then went on without seeming to give herself any further concern. After this, she would pass nearly whole days without being spoken to, or the least attention paid to her. She never seemed to be so happy or contented as when entirely left to herself, nor so unhappy as when any person attempted to obstruct her motions. In some of her former paroxysms, particularly the one before the present, she seemed to notice what was going on about her; was pleased with the presence of her former companions; would have taken their playthings into her own hands and examined them with care and apparent satisfaction; and yet all the while the motions were going on with undeviating regularity. At present she made no use of her hands, and seemed to pay no attention to anything, except when she heard some proposal respecting herself. She was remarkably attached to her father, and seemed to be more happy under his charge than that of any other person. She was also fond of her mother; but, as she had a young family to attend to, the father was the chief attendant.

"She generally voided her urine before she began her motions in the morning, and after she was stopped at night; but she required likewise to void it through the day: this seemed to give her great distress. After feeling the desire she began to whine and fret, but still continued the motion. At last, when it could be no longer retained, and when she began to feel her clothes getting wet, she was excessively distressed and uneasy, and generally did not recover her composure for the rest of the day. After some time, the attendants, when they perceived those signs of uneasiness coming on, drew her forcibly to the bed side, and held her fast till this operation was accomplished. Although she wished this to be done, she struggled a good deal; and if they attempted to keep her a single moment longer than was necessary she became quite outrageous. Her bowels of late had been excessively costive; she generally had no motion except in consequence of an injection. Innumerable attempts were made to remedy this by different kinds of purgatives, but it was found very difficult, if not impossible, to make her take any. Even calomel, concealed in the most secret manner, could hardly escape her detection. It had, however, at times been given to such an extent, as to affect her mouth, as well as to make a considerable impression on her bowels. Her body was greatly emaciated, though not so much as might have been expected from the violent exercise and small quantity of food she took. Her skin was harsh and dry, and her extremities generally cold.

"Besides the remedies I have mentioned, a variety of others was tried during the course of her illness. An emetic was given at the commencement. She was three times blistered on the head. Her bowels had been violently purged for several weeks. The cold bath had

been persisted in for six weeks. A seton was inserted in her neck, and kept discharging for a considerable time; leeches were applied to the temples; gestation in an open cart was tried on one or two occasions. It was after an excursion of this kind that she was seized in the night with the second kind of motion, turning round in bed like a roller; she seemed to experience no sort of relief from any thing that was tried. She had been brought into Glasgow during the night in an open gig, and returned home in the same manner. The day following, she was seized with a spontaneous diarrhœa, and soon after she became more tractable. She took every purgative that was prescribed, and as often as they chose to give it her. In two weeks the motions came more slow and languid, and the difference of elevation between her right and left leg was still more remarkable. Her father now attempted to put a stop to the paroxysms before the usual period, and succeeded. She continued sick and distressed all night. Next morning, when the motions should have begun, she expressed a wish to go to bed. For some time she kept her bed pretty constantly, but began to show signs of amendment, and never afterwards had any more motions. In the course of a few weeks she recovered her speech completely, and also her former health, strength, and spirits, and has continued perfectly well ever since. If any difference, her friends think she is now more affable, active, and intelligent than ever.

"During the whole illness, the mind seemed to be affected nearly in the same manner as we find it in common cases of chorea. This was more especially the case towards the latter part of her illness. After the occurrence of the diarrhœa, she became more sensible, and was much more easily persuaded to do any thing which was judged necessary. As purgatives had been strongly recommended by most of the medical gentlemen who saw her, these were diligently applied, and operated powerfully, and, I have no doubt, contributed materially to her complete recovery. The disease may perhaps have a tendency to run a definite course, and cease spontaneously. On the other hand, the same medical treatment which seemed void of efficacy at the beginning, may have proved beneficial at a more advanced stage, and I cannot help thinking that the present case goes a considerable length in proving the expediency of Dr. Hamilton's purgative plan in chorea, and similar affections.

"Since her recovery innumerable attempts have been made to ascertain if she recollects what passed during her illness, and what ideas she entertained at the time, but she has always shown the utmost reluctance to speak on the subject. She has, however, on various occasions, especially among her companions, inadvertently mentioned so many circumstances which occurred during her illness, that her friends have no doubt of her remembering distinctly every thing that happened, even when she was at the worst. For the account of her situation since she left Glasgow, and also for some particulars respecting her former history which had escaped me, I am indebted to my late pupil, Mr. Andrew Lindsey, now surgeon at Galestone. The whole statement, as now drawn up, has been submitted to her parents, and has received their corrections and approbations. Another case, similar to the one I have related, occurred some years ago in the parish of Dulay, in Ayrshire, the subject was a young female; I do not know how long her illness continued, but she ultimately recovered completely. I have been informed of a third in the neighbourhood of Ayr, but of her case I have heard no particulars.

"A very remarkable case, perhaps somewhat similar to the one I have described, occurred at Bagarran, Renfrewshire, in 1696. The patient's name was Christian Shaw, a girl of eleven years of age: she is described as having had violent fits of leaping, dancing, running, crying, fainting, &c.; but the whole narrative is mixed up with so much credulity and superstition, that it is impossible to separate truth from fiction. These strange fits continued from August 1696 till the end of March in the year following, when the patient recovered. An account of the whole was published at Edinburgh in 1698, entitled 'A True Narrative of a Young Girl, who was strangely molested with Evil Spirits, and their instruments in the west, collected from authentic testimonies.'

"The whole being ascribed to witchcraft, the clergy were most active on the occasion. Besides occasional days of humiliation, two solemn fasts were observed throughout the whole bounds of the presbytery, and a number of clergymen and elders were appointed in rotation to be constantly on the spot. So far the matter was well enough. But such was the superstition of the age, that a memorial was presented to his majesty's most honourable privy council, and, on the 19th of Jan. 1697, a warrant was issued, setting forth 'that there were frequent grounds of suspicion of witchcraft in Renfrewshire, especially from the afflicted and extraordinary condition of Christian Shaw, daughter of John Shaw, of Bagarran.' A commission was therefore granted to A. Lord Blantyre, Sir John Maxwell, Sir John Shaw, and five others, together with the sheriff of the county, to enquire into the matter and report, and this commission signed by eleven privy councillors, consisting of some of the first noblemen and gentlemen in the kingdom.

"The report of the commissioners having fully confirmed the suspicions of witchcraft, another warrant was issued on the 3d of April, 1697, to Hullcraig, Sir John Houstoun, and four others, 'to try the persons accused of witchcraft, and to sentence the guilty to be burned or otherwise executed to death, as the commissioners' should be inclined. The com-

missioners thus empowered were not remiss in the discharge of their duty. After twenty hours were spent in the examination of witnesses, and counsel heard on both sides, the counsel for the prosecution exhorted the jury to be aware of condemning the innocent; but, at the same time, should they acquit the prisoners in opposition to legal evidence, they would be accessary to all the blasphemies, apostasies, murders, tortures, and seductions, whereof these enemies of heaven and earth should hereafter be guilty. After the jury had spent six hours in deliberation, seven of the miserable wretches, three men and four women, were condemned to the flames, and the sentence was faithfully executed at Paisley, on the 10th of June, 1697.

"Though we cannot confidently boast of the powers of medicine in this disease, yet we may flatter ourselves that this narrative may not be without its use, by putting the last hand to the cure of a malady of the mind, which in the past time has led to such tragical incidents; and we may be permitted to congratulate ourselves on our lot being cast in an age of the world, in which, from the progress of science, even the lowest orders are, in a great measure, delivered from the degrading dominion of a superstition, with which the higher orders, nay, the judges of the land, were infected, at a no very distant period of our history."

Another most remarkable case of the kind is recorded by Mr. Wood, in the seventh volume of the Medico-Chirurgical Transactions. The morbid movements were in measured time, and constituted a sort of triangular dance, as soon as music was struck up, but ceased instantly upon a change of one time to the other, or upon a more rapid roll of the drum, which was the instrument employed on the occasion. Advantage was taken of the last part of this very singular influence, and the disease was cured by a perseverance in discordant or too rapid time. Both the above cases have been placed under the species of chorea; the latter appears a direct case, though the former of Dr. Watts more partakes of the characters of the one that I have recorded from St. Thomas's Hospital.

Reviews.

A Demonstration of the Nerves of the Human Body. By Joseph Swan. London: 4to. 1834. Pp. 175. Illustrated by 25 engravings on steel.

The publication of this work in its present form, and at such a moderate price, is equivalent to a very important gift from the author o the members of his profession, and especially to the anatomical student, whose means can rarely enable him to obtain the more costly folio. The edition now before us is a faithful copy of the larger one, both as regards the letter-press and the plates; the latter, indeed, have been executed by the same artists whose abilities were so happily displayed in the greater work. The only difference which we can detect, after a very careful comparison between the engravings of this and those of the large edition, is, that the latter are, in some respects, more elaborately finished; for distinctness and beauty of execution they are equal.

Those who are most intimately acquainted with the former descriptions of the nerves, and have taken the trouble to compare them with each other, and with nature, and to note the discrepancies between them, will best be able to appreciate the result of Mr. Swan's indefatigable researches, as displayed in the work before us; *they* will fairly estimate the intricacy and difficulty of the subject, and will admire in proportion the clearness and simplicity of his descriptions, his accuracy, and his indomitable patience; having no theory to maintain by his investigation, he has simply described and delineated what is to be found in nature, and he does not, as too often occurs, bring his imagination in aid of his pen and of his pencil.

It is, of course, impossible, within the limits of a notice like the present, to enter upon an analytical review of the work, and we can only, therefore, give our readers a rapid sketch of its arrangement, observing, at the same time, that the eighty figures, which are contained in the plates, illustrate almost every part of the descriptive letter-press. The work commences with the sympathetic nerves; the appearance, form and structure of its ganglia and their connecting cords are described, together with the mode and subject best adapted for displaying them. After these preliminaries, the author methodically traces the ganglia, branches, communications, and plexuses of this nerve through the region of the head, neck, chest, and abdomen. This description includes the nerves of the heart and lungs, the splanchnic nerves, and the complicated ganglia of the abdomen, all of which are amply illustrated by some magnificent engravings.

The second part of the work commences

with some introductory remarks on the structure of the cerebral and spinal nerves, and is devoted to their description; the author successively traces the cerebral nerves from the first pair to the ninth, and then in the same manner he goes through the spinal nerves, their origin, course, connexions, and distribution.

In conclusion, we earnestly recommend the present edition of Mr. Swan's work to our readers. It is, upon the subject of which it treats, the most complete, the most accurate, and, let us add likewise, the cheapest work ever presented to the profession.

Traité théorique et pratique des Blessures par Armes de Guerre, redigé d'après les Leçons Clinique de M. le Baron Dupuytren, Chirurgien-en-Chef de l'Hôtel Dieu, et publié sous sa direction par MM. les Docteurs A. Baillard et Marx. Tome 1e, in 8°. 7 fr. Paris et Londres, 1834. J. B. Baillière.

A Theoretical and Practical Treatise on Wounds inflicted by offensive Weapons; drawn from the Clinical Lectures of M. Dupuytren, Principal Surgeon to the Hôtel Dieu, and published under his superintendence, by Drs. Baillard and Marx. Vol. 1st. 8vo. 7 francs. Paris and London, Baillière. 1834.

Our neighbours on the Continent have of late had numerous opportunities of improving their practical knowledge of those wounds which are "inflicted by offensive weapons." From the period of the glorious *three days* to the present epoch, military skirmishes or civic disturbances have been so completely in vogue, that their hospitals have scarcely ever been wanting in interesting cases of the description under notice. In fact, there has been as much reason to expect a valuable treatise of the nature of the one now before us from our battle loving friends on the Continent, as to expect a work on "*injuries of the head*" from the chirurgeons of the sister land, a place rather fertile in such accidents.

Accordingly, previous to the appearance of the publication now under review, we find that various valuable clinical lectures have been delivered on this subject by Dupuytren, Roux, Sanson, and Jobert, and several other surgeons of eminence. In the compilation of MM. Baillard and Marx we have the lectures of the first-mentioned surgeon collected, arranged, and, at the same time, considerably extended.

The Preface and Introduction are employed in giving a detail of the various offensive weapons which have been or are in use—from the pocket pistol to the catapulta, the cannon, and the monster mortar. They indicate considerable research, but, although of some interest, are not of any practical importance.

Proceeding further in the examination of the work, we find our authors admitting twelve different species of wounds in their classification, namely—1st, punctured; 2nd, incised; 3rd, punctured and incised; 4th, contused; 5th, by commotion; 6th, by crushing; 7th, lacerated; 8th, by tearing; 9th, by attrition caused by weapons discharged by air or steam; 10th, by attrition caused by portable firearms; 11th, by attrition caused by cannon; 12th, burns from gunpowder, fusees, &c.

This classification is, to say the least of it, uselessly complicated; five divisions would amply suffice, namely, those commonly employed by English surgeons. First, incised; second, punctured; third, contused; fourth, lacerated wounds; fifth, and lastly, burns. The first, second, fourth, seventh, and twelfth, therefore, of M.M. Baillard and Marx, are the only useful divisions, the others ought to be looked upon as merely sub-divisions; for instance, wounds by attritition, whether resulting from the action of air or steam-guns, muskets or cannon, must be of the same nature, and consequently to be placed in the same class, as they differ only in their degree of intensity. Again, wounds by crushing, laceration, or tearing, must also be classed together; and it appears to us, that the introducing these numerous divisions into classes, species, &c., (a practice, by the by, to which Dupuytren and his disciples are much addicted,) will, and does, tend very much to obscure that simplicity of system, by which the acquirement of an art or science is so greatly facilitated, and without which the attainment of a due or intimate knowledge of the most ordinary art is considerably impeded.

But leaving this subject, although an important one, it becomes now our duty to sig-

nalise some of the facts and opinions which are recorded in the work under notice.

We find a large space of the work devoted to describing the length, depth, breadth, shape, &c., of wounds inflicted by various weapons, a subject of considerable importance in a medico-legal point of view, but scarcely worthy of attention as far as regards the treatment. Thus, in the chapter on punctured wounds, we find it stated that rounded instruments which can inflict such wounds, and which apparently ought to make round wounds, and the cicatrices of which should be round, and projecting or depressed, sometimes, on the contrary, form wounds and cicatrices similar to those produced by a penknife with two cutting sides, which can only be explained by the direction of the fibres of the skin. One or two cases of this kind having occurred to M. Dupuytren, he performed several experiments on the dead body, with a conical bodkin, and always obtained small elongated wounds, with acute angles; they were of greater size in proportion to their depth. If the lips of these wounds gaped, all that was necessary to close them was to stretch the skin in a certain direction, any other would only tend to separate them more, from which circumstance M. Dupuytren concludes that the sole action of the instrument was separating, and not dividing, the fibres of the skin.

In the chapter on punctured wounds complicated by tetanus, we have two remarkable cases put on record. In the first, the complication took place after complete cicatrisation of a wound made in the palmar eminence, (the mass of muscle attached to the thumb,) by a splinter of wood. The median nerve was found to be somewhat changed in structure. In the other, the disease followed a blow from a whip, a knot of which was found lodged in the substance of the ulnar nerve.

We have afterwards an interesting chapter on the direction of projectiles from fire-arms, and the nature of the wounds inflicted by them.

When speaking of the splinters of bone which they sometimes cause, M. Dupuytren divides them into three species, which, according to him, require a difference in the treatment, and the prognosis which may be formed. These divisions are primitive, or those which are completely separated from the bone and the soft parts, and may be removed at once; secondary, or those which are only partially separated, and require from three days to a month ere they can be taken away; and, finally, *tertiary splinters*, which are produced by a work of nature, which is very long in taking place, and may require from ten, fifteen, to twenty years for their separation. M. D. treated, in 1830, an old soldier for these tertiary splinters, who had received his wound in 1813. Next follows a useful article on the hygiene of the wounded—or the regulation of their diet—which should depend on their constitutions, habits, and countries; for instance, a diet, which would prove fatal in a cold country, is absolutely necessary in a hot temperate clime. When the Russians were in Paris in 1814, those of them who were labouring under acute complaints, or while their wounds were in a state of extreme inflammation, had food of difficult digestion supplied them with brandy and wine, and were not inconvenienced by it; on the contrary, when they were placed on the French regimen, they were soon weakened, and speedily sunk.

In our next notice of this work, we shall commence with the article amputation, and the period at which it should be performed.

(*To be continued.*)

TURPENTINE IN CHOLERA.

To the Editors of the London Medical and Surgical Journal.

GENTLEMEN,—Having read, with great satisfaction, the case stated in your Journal of the 9th inst., of the successful application of stimulants in malignant cholera, I beg to add my testimony to their utility in this much-dreaded disease, not only at the commencement of the attack, but also in a more advanced stage.

The stimulus I have used is the spiritus terebinthinæ, in such doses as the violence of the symptoms require, from ℥ ij. to ℥ ss. pro dos. I was led to the adoption of this remedy from witnessing its great efficacy as an auxiliary in many abdominal affections, such as colic, obstruction of the bowels caused by scybalæ, puerperitis, &c. The relief afforded by the exhibition of turpentine, when given early, is, in most cases, very speedy; the pain

gradually subsiding after the first dose, seldom requiring a second. I gave it in a few cases last year with the most satisfactory results, one of which I shall state below, and in three cases this year. When the pain was violent, attended by cramp and congestion of the vascular system, the attack was soon arrested by the turpentine, which was retained by the stomach even after many diluents were rejected, the patients in each case expressing the greatest relief and comfort from the cordial effects of the medicine, and stating that they perceptibly felt it circulating through the whole system.

Case.—A. T., a carpenter, was attacked early in the morning of the 19th Aug. of last year with violent spasm in the abdomen, accompanied with cramp in the extremities; frequent vomiting and purging; stools rice-coloured, without bile; suppression of urine; great anxiety in the countenance; vox cholerica; blueness of the skin; prostration of strength; and cold clammy perspiration pervading the whole body; the pulse low, quivering, and intermittent. I gave him the following draught:

℞. Spt. terebinth. ℥iiss,
Tinct. opii, gt. xl,
——— rhei, ℥iij,
Ess. menth. pip. gt. x,
Syr. pap. alb. ℥j,
Aquæ pap. ℥vj.—Ft. haust.
statim sumend. et repetend in 2dis horis.

The first dose having subsided the spasms, &c., a second only was given. He had his abdomen and extremities rubbed with the following liniment:—

℞. Ol. oliv. ℥ij.
Spt. terebinth.
Tinct. opii. āā ℥j.
Tinct. saponis. ℥ij.
M. fiat liniment.

A flannel bag containing heated salt was applied to the abdomen, and a pediluvium of hot water and mustard used, as a hot-bath could not readily be obtained. From this period reaction commenced, and the patient merely required a dose or two of calomel, the next day worked off with castor oil.

From the violence and rapidity of the symptoms, I have every reason to believe that I should have lost my patient had I waited for the effects of calomel; and I think this case, with many others, is an urgent call to the profession to be prompt in the application of decisive and vigorous measures, in the treatment of a disease which advances with unprecedented rapidity towards a fatal termination.

I remain, Gentlemen,
Your's, very respectfully,
George Sawyer, M.R.C.S.L.
22, *Lloyd-square, Pentonville,*
August 21*st*, 1834.

NEW INSTRUMENT FOR EXTRACTION OF STUMPS.

To the Editors of the London Medical and Surgical Journal.

Gentlemen,—I trust the accompanying observations on a new kind of forceps for the safe extraction of stumps of teeth, will not be thought uninteresting to the numerous readers of your Journal.

Having always entertained a great dislike to employ an instrument so uncertain, and, even in skilful hands, so dangerous as the punch, I was induced to consider attentively the difficulties to be overcome, and the best means of overcoming them, feeling convinced that a substitute for it might be constructed, not only free from its defects, but possessing qualities not hitherto combined in one instrument.

Having succeeded beyond my expectations, I cannot, I believe, do a greater service to the profession and the public, than by laying before them a description of my forceps, and the result of the experience I have now had with them.

They resemble, in general appearance, the common forceps, differing, however, from them in these essential particulars:—1st. In the blades, which are hollowed out on the inner surface, being made to approximate at the points in such a manner as to embrace most exactly the conical root of a tooth; 2nd. In this hollow being *perfectly smooth*; and, 3rd. In the extremities having a cutting edge, a form of blade best calculated to find its way down between the root and its socket.

They were originally designed for removing the stumps of all the anterior teeth, for which purpose they have been found preferable to either the key, common forceps, or punch.

The facility with which these were removed, led to a trial of them on the bicuspids

and separated roots of the molars, and with equal success.

The method of using them is simply this:—The cutting edges, which should always be kept sharp, being applied around the circumference of the stump, the blades are to be gently insinuated between it and the socket, keeping as close to the former as possible. A rotatory for the upper, and a lateral motion for the lower teeth will fix the instrument, and remove the stump with great ease. Any attempt, indeed, to pull or extract by force will not only prove fruitless, but risk the breaking either the stump or the forceps, the latter being thin and highly tempered.

Their form and principle of action are those of two wedges, pressed in between the root and the socket; the deeper, therefore, they can be inserted before attempting the removal of the stump the better.

The advantages over the punch are, that the gum is separated and the stump removed at nearly the same moment, the pain is trifling, the sight of the operator is not obstructed by bleeding, as in ordinary lancing of the gum, the grasp is so equal that there is little probability of breaking even a hollow stump; and, lastly, they cannot possibly produce any injury, either to the jaw-bone itself, to the neighbouring teeth, or any of the soft parts, as the punch often does; thus, in fact, simplifying and rendering more certain and less painful a much dreaded and often tedious operation.

I have found them equally successful in removing irregular front teeth from the lower jaw, for which purpose I now invariably use them.

These forceps are to be procured of Messrs. Weiss, surgical instrument makers, 62, Strand, who are in possession of all my patterns.

Mr. Weiss is the *only maker* having permission to use my name, with which, therefore, each pair will be marked.

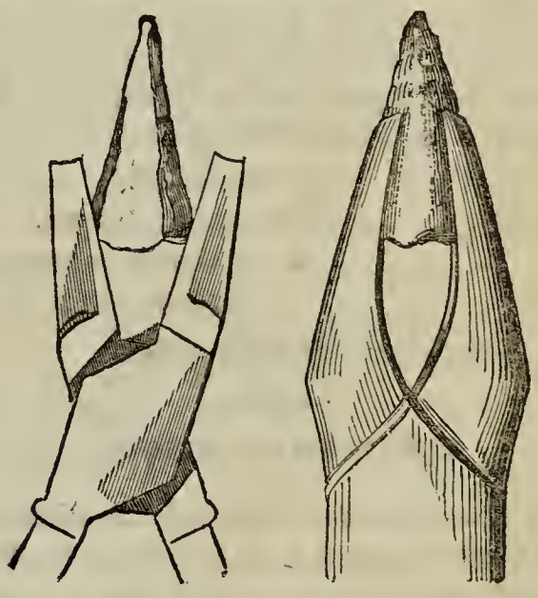
I have considered this necessary for two reasons:—1st. That the profession may be ensured having a correct and well-made instrument; and, 2nd, I cannot take on myself the imperfections of badly-executed copies, which must ever exist where the original is not taken as a guide.

To meet all difficulties, several sizes are required, varying from 1 to 12.

Amongst them are two pairs of cutting forceps, for the purpose of separating the fangs of molar teeth, when they are very firm in the socket, and are suspected to diverge, so that their extraction entire would endanger the jaw-bone. By this method, the possibility of such an accident is entirely done away with.

Objections have been urged against the length of the blades of Nos. 2 and 4; but, in elderly persons, the stumps of the lower molar teeth are often so deeply seated, that a shorter blade will not easily reach them.

The smoothness of their inner surface has also been objected to, particularly in a late number of the *Lancet*, by an individual professing to have invented an instrument "*precisely similar*" to the one I have now described: he asserts, that the forceps in question were "*in point of fact invented by himself;*" and begs me to state the difference between my forceps and his. I cannot do this more *effectually* than by contrasting them in the accompanying sketch, leaving each of these "*similar instruments*" to speak for itself. By this means both his assertion and invention will be duly appreciated.



No. I exhibits the blades grasping the stump securely and equally, with such a hold its removal is certain.

I shall not dispute the *originality* of No. 2; on the contrary, I cannot but do the inventor the justice to say that if *he* can calculate on the certainty of removing a stump with *such an instrument*, his merit as an operator must be even greater than that to which, as a *mechanic*, he is, under all circumstances, entitled.

The *smoothness*, therefore, which this individual regards as a "*detriment*," I look upon as absolutely necessary to the accomplishment of the *principal object*, which is, not as stated by him, "to take the firmest possible hold of the stump," but to get the blades between it and the socket; the "firm hold" I conceive, from the shape of the blade, not from its roughness, follows as a matter of course.

The result of my experience with these forceps has been such, that I have carried on the principle still further, and now remove whole teeth in the same manner as I should remove a stump.

M Weiss is preparing these instruments also from my patterns, and should your provincial readers be desirous of employing them in preference to the old ones, they may be obtained under the name of "safety forceps," their construction being such that it is next to impossible to break a tooth with them with ordinary pressure.

Like the stump forceps, they save much inconvenience by acting as a gum lancet at the time of their application around the tooth; they reach below the neck, and consequently below the usual seat of decay.

With a hope that the introduction of these instruments into use may lessen the difficulties of the surgeon, and the sufferings of the patient, I beg to subscribe myself,

Gentlemen,
Your obedient servant,
J. Glasford Shepherd,
Dentist, M.R.C.S.

53, *Baker-street, Portman-square.*

BIRMINGHAM SCHOOL.

We observe that the General Committee of the Medical School have determined to place the Museum of that Institution on a similar plan to that of the Ecole de Médecine in Paris. The public are to be admitted free of expense during two months in the year, and the donors and their friends the whole of the year. Amongst the names of the donors we see some of the nobles of the land. This is as it should be. Neither science nor arts can rapidly advance without such resources.

THE

London Medical and Surgical Journal.

Saturday, August 30, 1834.

ADDRESS TO OUR READERS.

It has already been announced to the public that this Journal has changed its Editors, that it has ceased to be under the fostering care of Dr. Ryan. Any further explanation of the circumstances which led to the separation would not interest our readers, but would necessarily exclude useful matter. We cannot, however, avoid alluding to the fact, which, indeed, is scarcely necessary, seeing that *Dr. Eady* does not employ a more conspicuous placard than that which publishes the twofold announcement, that *Dr. Ryan's* Journal hangs out at the Old Bailey, and that the Doctor himself has a town residence.

It becomes, then, a duty which we owe to the friends and patrons of this Journal, to acquaint them with the views and intentions of our new administration, to give publicity to the principles which shall guide us in the direction of affairs, and to announce the objects we wish to attain. In politics (for even the healing art cannot keep aloof from politics) we profess ourselves anxious to see real abuses corrected, and, when these abuses are detected, to use all our endeavours for effecting their removal,—our medical corporations rendered more efficient,—education made a matter of greater importance,—merit more completely and more fully encouraged, and medical charities more efficiently administered, in reference to the comforts of the poor, and the advancement of medical science. We shall never shrink from making public any abuse or neglect, whether committed by private individuals or collective bodies;

but we shall feel ourselves bound not to publish any statement affecting the character of a member of the profession, unless it be correctly authenticated, and the most satisfactory evidence be afforded of its truth. As our object is the welfare of the profession, and the promotion of science, we hope therefore not to be accused of acting from unworthy motives. But our great and paramount intention will be to fill the pages of this Journal with useful and important scientific information. We shall continue to publish courses of lectures on practical subjects; we shall give ample space to original communications; works of real value, such as must interest the practitioner, will be carefully analysed; the more interesting cases from our London and other hospitals will be accurately reported by *practitioners*; scientific intelligence, both at home and on the Continent, and notices of new works, will constitute the several departments of our Journal.

QUACKERY AND MEDICAL REFORM.

Is it not surprising that, in this enlightened age and country—a country possessed of all the blessings of liberty, *murderers* should be allowed to traverse the land, slaying its inhabitants without any cognisance being taken, or any preventive measures being adopted, by the legislature? Instead of quackery declining, it is making even more rapid strides, encouraged by the silent patronage of government, and the apathy of the medical profession. There is scarcely a medical man who does not declaim against and vituperate the system inpriv ate society; but who are there who stand boldly forwards and demand the abolition of so nefarious a system? We hesitate not to affirm, that it has been the wish of the conductors and friends of this Journal to make it a free and open medium for exposing every abuse, and of holding up to the world *empiricism* in all its hideous deformities. But what can any journal accomplish single-handed? We complain of the apathy of the profession on this subject, of the supineness of its members, and, of course, regret the want of unity which prevails. There is quackery even in every rank of the profession!—Would that there was not! A glorious epoch, however, is before us; we hail with heartfelt satisfaction that period when an august parliament shall pronounce the verdict,—shall announce to the profession a boon, conferred not on it alone, but on the community at large. We trust that the MEDICAL BILL will not only operate as a total preventive of quackery, but that it will produce unity in the profession, and diminish that discord which has so long existed, a "consummation devoutly to be wished." Should these objects not be attained, one important advantage will result; viz.—that the source of the evil will be obvious to all. If the medical witnesses examined before the Parliamentary Committee have done their duty (whether they, in political phraseology, be Tory, Whig, or Radical), have fearlessly and judiciously exposed the injurious results of licensing medicines vended by quacks, and have urged on the Committee the imperative necessity of a discontinuance of this traffic, they will be entitled to the respect and commendation of their professional brethren: they will have given to the legislature *data* on which they are to found their regulations; on them is reposed implicit confidence; *Parliament will possess the remedy.* But how is the legislature to prevent quackery *out of the profession?*—Will they cease to "license

patent medicines?"—Will they render null and void those poisonous nostrums which are already in such extensive circulation under the title of *specifics*,—nostrums which are daily, nay hourly, destroying thousands of the inhabitants of this land,—victims deluded by the arrogance of puffing quacks—by the semblance of the acknowledged virtues of these drugs being patronised by Royal mandates, and by the support which is given to them by men of the highest rank and station to the very impostors vending or applying them. In truth, it makes us blush for the honour and the intelligence of this nation, that we are compelled to *publish* such statements. Who are the men who have such an abhorrence of quackery?—Those who are acquainted with its baneful influences! There is a spirit of philantrophy in the breasts of honourable men, which rouses them to exertion, and impels them instinctively to expose the abominations, and the malignancy of quackery. We are convinced that pecuniary motives are not the absolute—the only incentives. Quacks "*make work*" for the regular practitioner!

The profession appears divided into two distinct classes,—one consists of men who have raised themselves to the highest pinnacle of glory, either by their intellectual prowess, or by their industry, or their private interest, and who care not whether quackery is continued or not. However much they may abhor the system, they are listless in opposing it. The other class is composed of young men, physicians, surgeons, or apothecaries, who are toiling for their daily bread, more arduously than slaves, and see around them *quacks* rolling in their carriages, and faring sumptuously every day. Here we have presented to us one of the sources of non-unity in the profession, a source which has prevented, or retarded, heretofore, those representations to Parliament which have now commanded that rigid examination into the laws and regulations of the medical profession—that scrutinous inquiry which has occurred during the last few months. In justice, nevertheless, to those *denominated* heretofore apathetic individuals, we are free to confess that many of them have delivered sentiments expressive of the evil effects of empiricism, and have likewise suggested means for its prevention. We hear of occurrences of death resulting from quack medicines. Scarcely a week passes over us without the announcement of some unfortunate person having fallen a victim to *Morison's Pills*, or a similar farrago of deleterious drugs. Will this practice be allowed to continue?—No. Verily, empirics shall have their reward.

The Parliamentary Committee has now terminated its toilsome labour. The immense mass of evidence which has been elicited is of the most curious character; when printed, we presume few medical men will not be anxious to possess such a document. We have no pretensions to prophecy, but claim the privilege of entertaining our own opinions on the probable results of the *Parliamentary Inquiry*. We are certainly not enthusiastic enough to prognosticate that all existing institutions will be annihilated. Such a thorough levelling system we cannot anticipate—it is not in accordance with the feelings of rational Englishmen. Let us have reform, but let it be substantially good; the period of change and of improvement is at hand. Let, above all, *industry* and *talent* be the competitors for *titles* and *fame*. That the success of a medical man has not hitherto depended on these qualities, is a circumstance deeply to be lamented;

but we shall never fail to advocate this principle, with all the energies and all the eloquence we can command. We say not this egotistically; but let experience hereafter be the proof. Favouritism doubtless will be limited in its influence. Monopoly *would* cease to exist, was the profession honest to itself. Men of sterling merit only should be raised to posts of responsibility and of honour.

PRESENTATION OF A PIECE OF PLATE TO DR. THOMPSON OF SHEFFIELD.

Dr. Thompson of Sheffield was presented, last week, by his professional brethren, with a massive and highly ornamented piece of plate, for his strenuous and persevering exertions in the cause of Medical Reform. We know that, from the earliest period of his career in Sheffield, he has been unremitting in his endeavours to expose all local medical abuses. It has ever been his object to produce harmony amongst his fellow-practitioners, and by every means in his power to make the profession in Sheffield what it should every where be, an honourable and respectable body of individuals. It is gratifying to every lover of reform to see its honest advocates so nobly rewarded, and none, we believe, is more worthy of such a reward than Dr. Corden Thompson.

WESTERN CIRCUIT.

We beg to call the attention of our readers to the following trial, so interesting to the profession.

Lasales v. *Lucas.*

Mr. Smith opened the pleadings.

This was an action to recover the sum of 55*l.* 10*s.*, being the amount of an apothecary's bill, for medicine and attendance. The defendant, a lady residing in this city, pleaded that the plaintiff was not entitled to sue, inasmuch as he had not a certificate from the Apothecaries' Company, and did not practise antecedent to the year 1815, and, secondly, she paid 8*s.* 6*d.* into the Court for medicine.

The fact of the plaintiff having practised as apothecary antecedent to the year 1815, was proved by several witnesses.

The number of attendances charged was 440, at 2*s.* 6*d.* each, which amounted to 55*l.*

A servant maid belonging to the defendant proved that the plaintiff used to visit her mistress about three times a-day in the end of 1829.

Mr. Smith, a surgeon, visited the defendant at that period, and saw the plaintiff frequently attending her. Thought 2*s.* 6*d.* a visit an extremely moderate charge.

Rebecca Meek had lived as a servant in the house of the defendant during the period of the attendance of the plaintiff. About three months ago, the defendant called upon her and asked how often she thought the plaintiff had visited her. Witness said about three times a-day. "That's wrong, Rebecca," said she; "if you stick by me, I'll serve you; and if Mr. Lasales sends you a paper, don't mind it." After she got all she could out of witness, she said that she had had a lawyer's letter.

Mr. Serjeant Wilde, with whom was Mr. Follett, addressed the jury for the defendant, stating that the plaintiff had been long since paid for his medicine and attendance; for he had sent in a bill for medicine in 1830, which was paid, and in which no allusion was made to attendance.

A bill for medicine, to the amount of 13*l.* 4*s.*, dated September, 1830, which was subsequent to the period of the attendances, was then put in.

Lord Denman told the jury, that if they were of opinion that it was agreed between the parties, or understood on both sides, that the plaintiff should be paid for his attendances, and that he was not paid, their verdict should be for the plaintiff. But if they thought that the plaintiff had left it to the defendant to pay what she thought proper for attendances, then their verdict should be for the defendant.

The jury, after having deliberated for a short time, returned a verdict for the plaintiff Damages 30*l.*—*Morning Herald.*

British Hospital Reports.

ST. THOMAS'S HOSPITAL.

A remarkable case of Disease of the Brain simulating Hydrophobia, from the kick of a Horse.

An unusual and interesting case is at present in George's Ward in this hospital. A poor boy, aged 12 years, received a kick from a horse, over the right eye, on the 29th of July, which laid bare the bone, but did not apparently injure it. The case went on well, the wound having nearly healed, till the 10th of August, when he complained of pain in the head, about the situation of the injury. In the night he was seized with convulsions, in which it was with difficulty he could be kept in bed. The mouth became drawn towards the injured side, at the same time the muscles of the face being in a state of fixed or tetanic spasm, so that it was with difficulty the jaws could be separated. About every ten minutes, or oftener, he was seized with violent spasms of the muscles of respiration, which consisted chiefly of a continued inspiratory effort, the jaws being firmly fixed, and every respiratory muscle at its highest point of action, much resembling the convulsion of hydrophobia, and it was certainly as distressing to witness. The effort of swallowing was convulsive and difficult, and what was remarkable, the spasm could be induced by a sudden movement of the bed-clothes, or by blowing on the patient, as in hydrophobia or tetanus, yet the case differed from the latter disease, in having no fixed spasm of any muscles, excepting those of the face, nor was there rigidity of those of the nucha, or back. He has complained of burning heat over the whole body, although its temperature is more cool than otherwise; in the intervals of the spasms he became very drowsy.

The patient has been bled and mercurialised, and the spasms are now less severe, but there is still a dilated pupil, and a greater fulness on the right than on the left side of the forehead.

Bronchitis—Anasarca—Death—Autopsy.

Sarah Hockley, aged 38, of lymphatic temperament, states, for six weeks she has been unwell; at the commencement of that period, was seized with pain in the head of so severe a character that it deprived her of all rest. In a few days, pain in the chest came on, which was much aggravated by each inspiration; and for some years she has been the subject of asthma. On her admission, she had but slight cough, but much difficulty of breathing; obliged to sit in half an erect position; for, on lying down, she is fearful of suffocation. The region of the larynx is extremely tender on pressure; by auscultation sonorous respiration is heard throughout the whole chest; impulse of the heart strong. Countenance of a bluish hue; eyes dull and heavy; tongue crusted with whitish brown mucus; pulse 120, small and feeble; hands and feet cold; legs œdematous; urine not albuminous, but deposits a thick sediment, which is re-dissolved on the application of heat. Dr. Elliotson ordered four ounces of port wine daily; and prescribed tinct. digitalis ℈j., tinct. scillæ ℈ j., sp. ætheris nitr. ℥j., acet. potassæ ℥ss., mist. camph. ℥j. M. fiat haust. 6 tis. horis sumend. After she had taken a few doses of this medicine, it produced sickness, and two drops of hydrocyanic acid were added to each draught.

On the 18th, five days from her admission, slight improvement; dyspnœa decreased; pulse reduced in number, but increased in power; the draught still occasionally produced sickness, in consequence of which three minims of hydrocyanic acid were given about ten minutes before each draught, and, as her bowels had been confined, ten grains of calomel were prescribed to be given immediately, and to be repeated in the morning.

21st. Her bowels had been relieved twice after each dose of mercury. Since yesterday there has been an increase of pain on the lower part of the chest, accompanied with great tenderness on pressure across each hypochondria; pulse 108, distinct, but not strong; bowels moved once to-day. From the increase of pain and tenderness, the wine was omitted; twenty leeches were applied to the epigastrium; and the next morning a large blister was placed on the painful regions.

25th. Scarcely any vesication has been produced by the blister; the pain became less after the application of the leeches, but now there is much tenderness of the epigastrium. Difficulty of breathing better; complains of occasional nausea; bowels open twice in the twenty-four hours. Twenty leeches were repeated on the epigastrium, after which a mustard poultice was applied.

Scarcely any alteration took place from this time until her death. From the leeches and mustard poultice she experienced relief. From the extreme exhaustion wine was again ordered. Her strength continued to decrease; the dyspnœa became more urgent; pulse remarkably feeble; extremities cold. Heat was applied to her feet several times during her illness; and on the 20th, a month after her admission, she died.

Autopsy.—Lungs congested; bronchial tubes filled with a thick glutinous mucus, the lining membrane highly vascular; peritoneal tunic covering the convex surface of the liver opaque. Liver presented a nutmeg appearance; heart atrophied, dilatation of ventricles and auricles; valves healthy.

Case II.—Ellen Flynn, aged 30, of scrofulous diathesis; has suffered more or less for the last ten years, in the winter, from cough and cold, accompanied with inflammation of the bronchial membrane. For the last year

she has been selling fruit in the streets, frequently getting very wet, which has very much increased her disease. For the last four months she has been scarcely able to get about. At the present time her countenance is indicative of the greatest distress. She cannot lie down, in consequence of the increase of cough when in that position. Cough very troublesome; slight expectoration; lips livid; conjunctiva engorged; legs and feet œdematous. By applying the ear to the stethoscope, loud sonorous respiration is heard over the whole chest. Action of the heart natural. Larynx not tender; urine natural, but scanty. Twelve leeches were applied to the chest, and a diuretic draught prescribed, composed of digitalis, squills, and the acetate of potass.

Leeches and cupping were had recourse to several times in the course of her illness; she continued the diuretics for a month after her admission, when all the inflammatory symptoms disappeared. No sonorous respiration could be heard in the chest; still she suffered from sudden attacks of dyspnœa, and complained of great debility; pulse 112, very weak. For the dyspnœa some of the æthereal tincture of lobelia inflata was prescribed by Dr. Elliotson, and two glasses of wine, with eggs, allowed daily. In a few days after taking the wine, she complained of pain at the pit of the stomach; was rather feverish; pulse 112, not so weak. Twelve leeches were applied to the epigastrium, and she continued to take wine.

The dyspnœa became better, but much œdema of the legs remained. Acupuncturation was ordered; this she would not submit to, and left the hospital.

Chorea.

Case I.—Eliza Holding, aged 16, tall and meagre, who for the last two years had been growing very fast, and two months since was attacked with fever. When this subsided, now three weeks ago, she was attacked with her present complaint, which came on in the following way; had pain in her temples, and back of the neck; this was soon succeeded by a continual agitation of the hands. The whole body, at the present time, is more or less affected, and this agitation continues when asleep as well as in the day time. Complains of constant pain in the head, knees, and legs, and flinches when touched on the back or abdomen; speech slightly affected. Has usually one hysterical fit daily, during which paroxysm she laughs violently, but is not conscious of it. Catamenia, which appeared two years ago, has not for the last three months made its appearance. Bowels generally confined. Half an ounce of the carbonate of iron was prescribed three times a day; this she continued regularly to take for 26 days, when she was discharged from the hospital perfectly well; but Dr. Elliotson recommended her still to persevere in the medicine to prevent a relapse.

Case II.—Betsy Paxman, aged 9 years, a healthy looking child, of fresh complexion, has been suffering from agitation of the whole muscular frame for 12 months. Her mother does not recollect whether any part of the body was attacked before the rest. Has been worse, from the mother's account, than she is at present, and was in the London Hospital for the same affection, where her spine was blistered and leeched, but without benefit. On the first attack she suffered from severe pain in the head, but never had the least pain in the spinal column. The whole body is now affected; she can stand, but not quietly; her face is frequently contorted, particularly when she speaks. When asleep she is quiet; tongue clean; bowels open.

The carbonate of iron was given also in this case, at first in two dram doses, which in the course of a week were increased to ℥ss. three times a day; this she continued to take for 14 days, when she became quite steady; after this she was kept in the hospital about a week, none of the symptoms returned, and she left, taking some medicine with her. In both these cases the house physic was necessary, in order to keep the bowels regular.

WESTMINSTER HOSPITAL.

Tetanus.

Joseph Mills, about 18, a sawyer by trade, residing at No. 7, Coburg-road, a healthy looking boy, of a stout build, muscular frame, and ruddy countenance, exhibiting strong marks of the sanguineous temperament, attended at this hospital as an out patient, in consequence of having crushed the forefinger of the left hand two or three days previous, while engaged in weighing a heavy piece of timber. This happened on the 27th of August, 1833. He went immediately to a chemist and druggist in the Edgeware Road, who strapped the wound tightly. When he came to the hospital on the 30th, the strapping was removed by one of the dressers, who found the soft parts of the finger sloughing, and the bone exposed. He was ordered to poultice it, and have aperient medicine, which acted very freely. He attended once or twice afterwards, and then did not make his appearance again until the 6th of September; in the meanwhile, the sloughs had separated, the third phalanx had come away, and the end of the second was denuded, the whole of the sore looking ragged and unhealthy. He was then the subject of fever, and pains and stiffness in the shoulders, which he called rheumatic; he, however, averred that he had not caught cold to his knowledge. He was strongly recommended to part with his finger, but refused his consent, on the belief that he was suffering from rheumatism; ordered cathartics, and to continue the poultice.

The next day (the 7th) his mother came at the usual hour, and reported that he was unable to

leave his bed; that he had suffered from spasmodic fits during the night, and, during one of these, had bitten his tongue severely; and also that he complained of increasing stiffness in the muscles, attended with great pain. The symptoms she thus outlined being those of impending tetanus, she was directed to bring him at once to the hospital in a hackney-coach. When he arrived, the countenance was expressive of great anxiety, and bedewed with sweat; the masseter muscles were not absolutely rigid, and he could open his mouth, and perform lateral motion with the jaw, but not to its full extent; the muscles attached to the jaw feel stiff; those of the back are stiff and painful; he labours under occasional cramps; pulse full, hurried, 96; bowels constipated; tongue furred; respiration laborious and hurried; complains of difficulty in breathing, and oppression at the chest; the soft parts of the finger are again sloughing.

Mr. Guthrie, under whose care he was placed, saw him directly, and removed the finger at the metacarpo-phalangeal articulation, forming the flap chiefly from behind; the flaps (a small one was made, in front) were not brought into close apposition, in order that suppuration might be induced; an evaporating poultice was ordered to be applied. Dr. Roe being present, Mr. Guthrie enquired of him what internal treatment he would recommend, the doctor advising the use of croton oil, to be followed by a full dose of opium, three drops of the oil were given directly; and three grains of opium ordered to be taken when the oil should have operated.

Mr. Guthrie, in alluding to the results of his experience in tetanus, remarked that, where it was the consequence of a wound, he had frequently amputated, some patients recovering, and others falling a victim to the disease. He had given an equally fair trial to bleeding, mercury, and all the other plans of treatment which had been recommended, and had always met with the same results.

6 P.M. Mr. Guthrie has seen him again; the croton oil has operated three times; stools not of a dark colour, but contained scybalæ. The opium was given at a quarter past five. Says he is relieved, and his breathing easier; respiration not so hurried, or so laborious; the stiffness of the muscles continues, but the cramps are lessened in severity; pulse smaller and hurried, not frequent, 80; no headach, nor pain in the hand; tongue coated, of a dirty-white colour. Mr. Guthrie ordered him to have the oleum terebinthinæ (should he be worse) every two hours, until strangury came on. Cold water to drink.

8th.—10 A.M. Passed a bad night, interrupted by spasm, and not sleeping for more than a few minutes at a time; the spasms did not recur until one o'clock this morning, and now return every quarter of an hour, and are exceedingly violent. He appears as if he were convulsed during the continuance of the spasm; the features are more anxious, flushed, and covered with warm sweat; pulse small, hurried, and cord-like, 94; bowels have not been open since yesterday; thirst considerable; has not made water since he had a stool last evening; the spasms chiefly affect the muscles of the spine and shoulder; the abdominal muscles are exceedingly tense; complains of pains in the shoulder at times, and also in the back, but not severe; the breathing is again hurried and laborious; is the subject of great nervous and constitutional excitement. When the house-surgeon visited him this morning, he ordered the following mixture, of which he has had one dose, and could with difficulty retain it on his stomach. ℞. Olei terebinthinæ, ℥iss., mucilaginis acaciæ quantum sufficit, aquæ f. ℥ivss. M. fiat mistura, capiat cochlearia larga ij. 2ndis horis. Catheterism has also been performed, and half a pint of high-coloured urine drawn off.

1, P. M. Has had three yellowish fœtid stools, produced by the turpentine, which has also caused a burning sensation in the throat; the breathing is easier, and the spasmodic attacks do not occur so frequently; the poultice, a cold one (although the evaporating poultice was ordered), is renewed every four hours.

9, P. M. Has continued to take the turpentine since the last report; it makes him exceedingly sick; the spasms are more severe in the legs and thighs; the muscles of the back are hard and tense, as well as those of the neck and jaw; has had an interval of ease, lasting about an hour and a half, but is now worse than ever; the bowels are freely open; the pulse is small, hard (cord-like), very rapid, 104; breathing hurried; the whole body bedewed with sweat; is quite sensible; was seen by Mr. Guthrie at 5 P. M., who ordered him an injection of ol. terebinthinæ ℥ss., tinct. assafœtidæ ℥ss., tinct. opii 3j., to be added to half a pint of gruel, and thrown up directly. The injection was given forthwith with a common enema syringe, and the greater part returned immediately. The nurse has just given another with the stomach-pump, which is retained. The face continues flushed; the back is slightly arched. Besides the injection, he had three grains of solid opium, at half past seven P.M., which is to be repeated in four hours, if necessary. The poultices have hitherto been applied cold; the one just used is hot; suppuration is commencing on the surface of the stump.

9th.—10 A. M. He passed rather a better night, dozing at times, until about three, A. M., when the spasms returned, and with great violence; has occasional intervals of ease, of longer or shorter duration, and, during these, he appears to doze; an injection was given during the night, and another this morning, with two drachms of laudanum, instead of one, in each; had also a three grains' opium pill at three A. M., which has since been repeated; he has also continued

the turpentine mixture; the breathing continues hurried and laborious, catching his breathing, as it were; the face is not so flushed, but very anxious; pulse rather full and hurried, 100; bowels very open; stools yellowish; urine passes freely; has the violet odour very strongly; the whole body is constantly covered with sweat; the poultice again applied cold to the hand.

1, P.M. Sir George Tuthill has just visited the boy, but did not make any remark on the case; Mills is very desirous that the turpentine should be omitted, as it makes him very sick, and the burning sensation in the throat continues; his wish was complied with; the symptoms continue much the same.

9 P.M. was seen by Mr. Guthrie and Professor Gräefe in the course of the afternoon; the symptoms then were not different from those he presented at 1, P.M.. Respiration hurried and difficult; spasms very severe, occurring at intervals; pulse hurried, 104. Gräefe recommended frictions with laudanum on the spine, which were accordingly practised; he was also placed in a warm bath at 100°, containing twenty-eight gallons of water, in which an ounce of potassa fusa had been dissolved; he was kept in it about twelve minutes. This was done, by Gräefe's directions, about 5, P.M. The injections are given every four hours, and the pill had been repeated. The respiration is still difficult; pulse small, frequent, and tremulous, 120; the body is not covered with perspiration at present; appears to be dozing constantly, except when the paroxysm is on him; his urine does not scald him; it comes away by jerks (as if the muscular coat of the bladder were affected by the spasm), rather than in a continued stream. Says he felt the bath rather irritating, and thinks he was relieved by it; but little reliance can be placed on this statement, as he always says he is better, when he is asked. The stump is covered with the extract of belladonna.

10th.—11 A.M. The symptoms continued to increase in severity, the spasms being stronger, and lasting a longer time, with shorter intervals of quiet; the breathing more hurried; the pulse small, frequent, and tremulous, until ten minutes to four in the morning, when he breathed his last. He continued perfectly sensible to the last moment, the arching of the back became more marked a few hours before he died.

The autopsy was conducted privately, so that a report of it can only be given from hearsay.

Brain.—Pia mater injected, effusion of lymph between the meninges, the sinuses gorged with blood.

Spine. — Extravasation of dark-coloured blood in the theca vertebralis, injection of the spinal cord and pia mater traceable in the nerves to a considerable extent.

Thorax.—The venæ cavæ, right auricle, and indeed the whole of the venous system, distended with blood; the arterial flaccid; heart and lungs healthy; old adhesions between the pulmonic and costal pleuræ.

Abdomen.—Viscera healthy.

Arm. — Radial nerve healthy; median nerve very much injected with blood.

Sir Anthony Carlisle, who saw the boy several times during the course of the disease, stated, that he recollected a case in which, during violent spasm, the abdominal muscles and peritoneum were lacerated, the body being arched backwards, as in this case. In Sir A. Carlisle's case, the internal mammary and epigastric arteries were also torn, and when an autopsy took place, the abdomen was found to be full of blood. The patient lived about an hour after the laceration had taken place.

He had seen another case, which was cured by electric shocks sent through the head. The patient was a boy, and he always called for it when he found the spasms coming on: he used to say "nurse, go for the doctor, I feel the nonsense in my head." Sir A. Carlisle has tried this remedy in other cases, but without deriving advantage from it. He considered that the disease arose from some injury to the head. He had had a case in which the thumb had been hurt, and the nail came away. The patient was nearly well, when an attack of tetanus came on; amputation was performed, but the patient died. He believes that tetanus more commonly follows injuries of the index and pollex than of any other part. The disease, he says, is owing to a strong acid in the system; and, in proof of that assertion, he added, that Mr. Accum spilt some strong nitric acid on his arm, and although he immediately diluted it, he was subject to spasms in the arm for months after, and, singular enough, lime-water always removed them. If he had a case of this disease under his care, he would treat it with alkalies only. The disease itself might depend either on the brain or a depraved condition of the blood. He thought that the case in which electricity proved serviceable was rather in favour of the brain being the organ affected.

Vesico-Vaginal Fistula.

Catharine Callaghan, æt. 26, a short, stout woman, residing in Romney-place, was admitted the 14th of May, 1834, into Queen's Ward, under Mr. White. She has been married five years, and has had three children. The first and second labours were difficult and prolonged, but were unattended by any unpleasant consequences. Parturition took place again in the beginning of May, when it was also exceedingly difficult, and continued 30 hours. She was attended by a midwife. In neither of her labours were instruments employed.

She did not notice any thing extraordinary, until about a week after, when she found the urine dribbling away, without her being able to prevent it, which state has continued ever

since, she says, and renders her life miserable. On examination, a fistulous opening was found between the vagina and the neck of the bladder, rather than the urethra; at least, the position of the opening being above the os uteri seems to favour that opinion.

Mr. White, being very anxious to afford this poor woman some relief, tried several plans of treatment. Position was in the first place tried alone, and afterwards with the catheter passed and retained, and again the vagina was kept plugged, but all proved unavailing.

Such being the case, on the 26th of July, she was brought into the operating theatre, to have ligatures passed. The speculum was introduced, but it was found that the instruments were not applicable, and she was sent back to bed. This manipulation induced diarrhœa, which was speedily arrested by the usual medicines. On the 9th of August, she was again taken into the theatre, and many attempts were made, but in vain, to bring down the fistulous opening, so that its edges might be pared, and ligatures passed. The instruments which had been constructed were found to be too imperfect for the completion of the operation. It was again put off, on the understanding that an instrument should be made, having two blades with half a button on each, so that when closed they should form one; these to be kept closed or allowed to expand, by means of a slide. The button part should be of a size to fit the fistula, and when passed through, the blades to be expanded, by which means a hold would be obtained on the diseased part, which could be drawn down, the button-like projection then serving as a support for the knife in cutting the edges of the opening; after which a flexible metallic wire could be passed through with the assistance of a porte-aiguille, and then twisted. The form of the instrument was suggested by Mr. W. B. Lynn.

The next week the apparatus was complete, but in the mean time the patient had taken it into her head to leave the hospital, so that the pupils were obliged to content themselves with an explanation of the instruments, and of the uses to which they were to have been put. It is very probable that with such an instrument, the operation would be nearly as easily performed, and quite as certain as that for hare-lip, to which, indeed, it would bear considerable resemblance.

APOTHECARIES' HALL.

NAMES of those gentlemen to whom the Court of Examiners granted Certificates of Qualification, Thursday, August 21st.

George Augustus Rees . London.
Abraham King . . Bridgewater.
Henry Myers . . Leamington.
John Craft Roberts . Holywell, Flintsh.
John Howard . . . London.

CORRESPONDENTS.

If *S. G.* refers to the name of the school where the lecture on cholera was delivered, he will find that it was given by Dr. Stoker, and *not* by Dr. Stokes, as Dr. Ryan has advertised.

The lectures referred to by Mr. Blyth would not be of sufficient interest to our readers, similar lectures having already been published by our contemporaries.

A former Pupil of the Jervis-street Dispensary —We are obliged to him for his communication; it shall be inserted in our next.

X.—The interesting subject referred to by him he will find discussed in another part of this Journal.

The case of cholera, with observations, from our able correspondent shall be inserted next week.

METEOROLOGICAL JOURNAL.

MONTH. Aug., 1834.	Moon.	Thermom.			Barometer.		De Luc's Hygrometer.		Winds.		Atmospheric Variations.		
21		68	69	56	29·48	29·44	70	68	S.W.	S.S.W.	Fine	Fine	Cloudy
22		66	69	55	29·51	29·53	67	67	S.S.W.	S.S.W.	——	——	Fine
23		62	66	55	29·65	29·62	67	63	S.W.	S.	——	——	——
24		60	65	50	29·46	29·46	66	69	S.S.E.	S.S.E.	——	Showy.	——
25		58	63	52	29.42	29·52	68	67	S.	S.	——	Fine	——
26		61	65	51	29·56	29·50	67	70	E.	N.N.E.	Cloudy	——	——
27	☾	57	63	49	29·50	29·53	69	66	N.	N.W.	——	——	——

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ALL Communications and Books for Review to be forwarded (free of expense) to the Publisher, 356, Strand, near King's College.

THE

London Medical and Surgical Journal.

No. 136. SATURDAY, SEPTEMBER 6, 1834. Vol. VI.

LECTURES ON THE THEORY AND PRACTICE OF MEDICINE,

BY WILLIAM STOKES, M.D.,

Delivered at the Medical School, Park Street, Dublin.—Session 1833–34.

LECTURE XXXI.

Local Treatment of Paralysis—Use of Moxa—Acupuncture with Galvanism—Mode of employing—Powerful action of a small Battery—Mr. Hamilton's Observations—Paralysis from Disease of the Arterial System—Diagnosis of this Affection—Pathology of Pott's Gangrene—Treatment of Dupuytren.

Gentlemen,—Having spoken of the general treatment of paralysis after apoplexy, we come now to the local management of the disease, or that portion of its treatment which consists in the application of stimulants to the nerves and their origins. Local stimulation of paralytic limbs may be performed in a variety of ways; all the usual stimulant embrocations may be employed for this purpose with the best effects. I shall not take up your time in detailing the different kinds of liniments which are used on such occasions; they are universally known, and may be varied *ad infinitum*. The flesh brush, the shower-bath, either tepid or cold, occasional blisters to the spine, or along the course of the nerves, croton oil and terebinthinate frictions,—all these are measures that may be employed with advantage. The use of the moxa has been also strongly recommended, and appears to be decidedly beneficial. The efficacy of all these remedies, however, seems to depend chiefly on the particular stage and nature of the disease, and hence their good effects are most apparent in those cases where the paralysis no longer depends on organic disease of the brain, but seems to be connected with that peculiar state of the nervous system which arises from a long interruption of the power of transmitting volition. It is in cases like this, that the application of the moxa has been found to produce the most favourable results. Where the lower extremities are affected, it may be applied over the sciatic nerve on the loins, or a little below and to the outer side of the popliteal space over the track of the peroneal nerve. In case of paralysis of the upper extremity, you may apply it to the back of the neck, or in the neighbourhood of the brachial plexus.

A gentleman, who does me the honour of attending these lectures, has related to me the particulars of a remarkable case, which I shall mention *en passant*. A young female was subject to repeated violent attacks of spasms with contraction in one of the upper extremities. She had laboured under this affection for a long time, and tried various remedies without benefit. At the suggestion of this gentleman she tried cupping in the neighbourhood of the shoulder and brachial plexus, and found that it produced decided relief to the symptoms. In this case it is highly probable that the disease was seated in the brachial plexus, and had no connexion with the brain, for it had continued for a great length of time (more than three years, I believe) without any remarkable variation in its symptoms. If the spasms of the arm had been produced by irritation of the brain, she would in probability have had paralysis long before this period; this, however, did not occur, and the probability that the disease was seated in the brachial plexus is still further confirmed by the fact, that the spasms were relieved by local bleedings. Here we have the spasms relieved by antiphlogistic means, but in a case of atony of the same nerves, most benefit would be derived from the use of stimulants. The more completely the paralysis is of this description, the more sure will be the effects of local stimulation. You will sometimes meet with cases of paralysis from pressure on the nerves without organic disease. Thus there is a case on record, of a person who lost the use of one of his upper extremities, from having leant too long over a bench at a public meeting. I recollect the case of a man, who during a fit of intoxication fell asleep with his arm thrown

over the back of a chair, and awoke with perfect paralysis of the hand. Cases like these are seldom of long duration, and are much improved by the application of the moxa. I may state, however, that permanent paralysis has been induced in this way. The best way of using the moxa is, not to make a deep eschar, but to touch the parts slightly, and repeat the application frequently. In the case of paralysis of the hand, immediate relief followed the use of the moxa to the back of the wrist.

While on the subject I may advise you always to employ the moxa in the mode first, I believe, devised by my friend and colleague, Professor M'Namara. The top of the moxa is to be dipped in a strong solution of the oxymuriate of potass, which is to be allowed to dry upon it. The moxa being fixed to the part by a little gum, a drop of strong sulphuric acid will produce immediate ignition. In this way you prevent all the alarm which the patient feels at seeing a lighted candle brought to the bed-side. The same rule is to be observed when you employ electricity, the best mode of using which is to place the patient on an insulated stool, and draw sparks from, or shocks through, the affected limbs. Electricity frequently does much good in such cases; but, in order to obtain decided benefit from it, you must persevere for some time in its employment. It has been lately proposed to employ the stimulus of electricity and galvanism in a different way, by transmitting it directly to the muscles of the affected limbs by means of needles, which are to be inserted into different parts of paralysed extremities, and which are intended to act as conductors for transmitting the galvanic influence. This has been termed *electro or galvanic puncturation*, and forms an excellent mode of applying the stimulus of galvanism. I have made many experiments as to its effects, to which I shall briefly direct your attention.

The first thing to be considered is the manner of its application.—The following is that which I use at the Meath Hospital:—Having procured two fine sewing needles, your first step will be to take the temper out of them; for, if you employ them in the tempered state, you will run the risk of their breaking in the flesh, and this would be very disagreeable. You can easily take the temper out of them by holding them in a candle until they become red hot, and then letting them cool gradually. The next thing is to place a head which will remain firm on the needle, and for this purpose you pass a small portion of thread through the eye, and then cover it with a bit of melted sealing wax. Having thus formed a head for the needle, you sharpen its point, and polish it by the emery pincushion, and the sharper it is the better. There is nothing more simple than to introduce the needles. You make the part of the skin tense with your finger and thumb, where you intend to introduce them, and, placing the point of the needle perpendicularly on it, you press it downwards in a slanting direction, using, at the same time, a rotatory motion, and thus easily pass it in; when you have pierced the skin and fascia, there is no difficulty in introducing it into the muscular fibres. The distance between the needles must be regulated according to circumstances. You then proceed to send the galvanic fluid to the part, and, for this purpose, the best mode is to employ a small galvanic battery with a limited number of plates. If you have plates of from two to three square inches you will find that from fifteen to twenty of these, in a state of ordinary action, will be quite sufficient, particularly in the commencement of the treatment. It is a curious fact, that the intensity of the shock is increased to an extraordinary degree by means of the needles. A battery which, in the usual manner, would not communicate any shock, will, when used with the needles, give a violent one, and communicate such a stimulus to the nerves as will throw the whole limb into violent spasms, and cause a copious perspiration to break out over the body. I have seen very great effects from a feeble battery in this way, and it would appear that this is the result of the *direct* transmission of the galvanic influence to the muscular fibre. In most cases a perspiration is brought on, the limb convulsed, and sometimes the whole body is thrown into spasms. As an illustration of the power of the battery when used in this way, I shall mention the following case:—A patient, who was under the care of Mr. Hamilton, laboured under amaurosis; he was anxious to try the effect of galvanism, and with this view inserted one needle in the upper part of the back of the neck, and another over the orbit, so as to direct the trajêt of the fluid across the base of the brain. He intended at first to use a small battery of twenty-five plates, but it struck him that even twenty-five might be too much. He made the experiment with three pairs of plates, and, the shock being given, the patient, to his astonishment, fell back as if he had been stunned by a violent blow on the head, and remained for nearly a minute in a state of insensibility. In other cases too, where the galvanism was applied in the vicinity of the head, I have found that severe headache, giddiness, and even a stiffness of the muscles of the face, were produced; all showing its powerful action on the nervous centre.

Some singular circumstances, connected with this subject, were observed in the Meath Hospital. It was found that after a certain number of shocks had been communicated to the parts, when you came to withdraw the needles, there was a very remarkable difference in the ease of removing them. The needle through which the positive galvanic influence had been transmitted, was found to be strongly fastened in its situation, while that, to which the negative pole had been applied, slipped out with the greatest ease. This result was constant.

In some cases, where half a dozen shocks or so have been given, the extraction of the positive needle has been only accomplished with considerable pain to the patient.

It has been suggested by a distinguished scientific friend of mine, that this results from the coagulation of albumen at the positive pole. Mr. Hamilton, however, who performed most of the operations for me, thinks that the true explanation is the paralysing effect of the negative pole on the muscular fibre, while the positive needle is firmly grasped by the increased contraction. Further researches are necessary on this point. Another fact connected with this subject is, that when the needles have been inserted into a large muscular mass, the positive needle is powerfully retracted, and carried, as it were, into the muscles. In one case, where the needle was inserted into the lumbar muscles, in a patient labouring under sciatica, more than one-twelfth of an inch of it was drawn in at each shock; so that, after a certain number of shocks, it passed up to the head. This is one reason for using the sealing-wax head, in order to prevent the complete passing in of the needle.

With respect to our experience of the value of this mode of employing electricity or galvanism, I have to remark that, if galvanism or electricity can be of any use to paralysed limbs, this is one of the best modes in which it can be applied. The apparatus is simple, can be prepared in a moment, and does not depend on the state of the weather, like the ordinary electrical machines. There is another advantage, also, it is not so likely to excite alarm in the mind of the patient. We have employed it in several rheumatic and paralytic cases in the Meath Hospital, but have not as yet been able to say that decided benefit has accrued from it to the majority of the patients on whom it has been tried. This is more particularly true with respect to paralytic patients; in the rheumatic cases we have found it more beneficial. In a remarkable case, where the deltoid muscle was paralysed and atrophied from some affection of its nerves, Mr. Hamilton tried it for a fortnight without any good effects. In a case of senile amaurosis, its effect was to produce flashes of light before the eyes, lachrymation, and contraction of the pupil, but, after a fortnight's trial, there was no improvement in the sight. We have had, however, distinct and unequivocal proofs of its value in one case of paralysis of the muscles of the face, which had all the characters of that described by Sir C. Bell, as resulting from an affection of the seventh pair of nerves. I have not the notes of this case at present, but shall bring them down and lay them before you on to-morrow. I may, however, observe, at present, that this patient had been for a long time labouring under an affection of one side of the face, and had used a variety of remedies. Those principally employed were stimulating liniments and the internal use of strychnine, from which he derived some slight benefit; but the application of the galvanic fluid, in the way I have mentioned, was followed by decided and rapid improvement. Indeed, from the time it was first applied, the patient recovered rapidly, so that in a very short time all the deformity of face disappeared. Now the value of the application is to be estimated in this way. Here we have a case of paralysis of a local nature, and not depending upon any disease of the brain; in this case the galvano-puncturation was tried, and found to be most beneficial. The conclusion, then, as far as a single case goes, is that this mode of treatment is best adapted to the form of paralysis just mentioned, in which we find an affection of some of the muscles remaining after the original disease of the brain has been removed. The same observation, I need not tell you, applies to all other remedies which are employed for the purpose of local stimulation.

Before I leave the subject of paralysis, there are two points to which I wish to call your attention. One of these involves the consideration of a remarkable form of paralysis in which the disease appears, as far as we can see, not to depend on any primary lesion of the *nervous system*. In this form we have a paralysis, not the result of any disease of the brain or nerves, but connected with an affection of the vessels of the part. This is a very singular disease, and I am anxious you should be acquainted with it, for I believe it is by no means so rare as many persons think. The other point to which I would direct your attention refers to the influence of magnetism on the human body; of this I shall speak on a future occasion, confining myself for the present to that form of paralysis which is connected with disease of the *vascular system*.

So as to give you some idea of this affection I think I cannot do better than read for you the notes of a case of it, published by Dr. Graves and myself in the fifth volume of the Dublin Hospital Reports.

A man, aged 44 years, was attacked in December, 1828, with alternating sensations of cold and burning heat in the toes of the right foot. These extended to the leg, of which the power became diminished. Pains in the foot next occurred, and in a month the part became cold and wholly deprived of sensation.

On the day of his admission the pain suddenly extended to the calf of the leg; and from this time he lost all power of motion in the leg. On admission the temperature of the body, with the exception of the affected limb, was natural. The pain had extended to the thigh during the night. The temperature of the limb was but 58° of Fahrenheit. Slight œdema existed about the ankle. There was complete loss of sensation from the middle of the thigh to the toes; the patient could rotate the thigh slightly, but there was no other voluntary motion possible. The femoral artery

appeared like a hard cord, painful on pressure, and without pulsation. By the stethoscope we found that pulsation was also wanting in the common iliac on this side, while that of the left iliac was plainly perceptible. The patient died on the fourth day after admission, the limb having become purple, tender, and covered with vesications.

On dissection, the right common iliac appeared distended and livid, and was completely plugged up by a dark clot, extending to the external and internal iliacs, and engaging the gluteal and obturator arteries. The same occurred in the femoral and profunda, and extended, as far as they could be traced, to the tibial arteries, and to the peroneal. The lining membrane of these vessels was soft, villous, and red; the clot in some places being separated from it by a layer of puriform matter. No disease in the veins. A large portion of the vasti and rectus muscles was *white* and hardened. Here you perceive a train of symptoms, some of which might be referred to disease of the brain, if the man had any cerebral symptoms, which was not the case, for his intellect was sound, and he had no evidence of cerebral disease except the paralysis.

His constitutional symptoms were emaciation, prostration of strength, and loss of appetite. The temperature of the body was natural, but, on examining the limb, we found (and this is a point of great importance) that it was as low as 58° of Fahrenheit, in fact, it was quite cold. There was also complete loss of sensation from the middle of the thigh to the toes, and though he could rotate the limb slightly, it was, in all other respects, powerless. Here we have paralysis of motion and sensation in one of the extremities, *with remarkable coldness of the limb.* On making an examination along the track of the femoral artery, we found that it was painful on pressure, *without any pulsation*, and conveying to the finger the feel of a piece of hard cord. From a consideration of those circumstances, we came to the conclusion that it was not pervious, and that this would account for the state of the limb. In this case, also, we made another remark, and this, I believe, is the only instance on record in which such a diagnosis was made. Up as high as the groin, the pulsation of the femoral artery could not be felt, and we were anxious to ascertain how far further the disease extended. The state of the femoral artery in the left groin was natural. On making an examination with the stethoscope, we found that the pulsations of the aorta were perceptible down to its bifurcation, but when the stethoscope was applied below this on either side, we observed that there was no pulsation in the right common iliac artery, but on the left side it could be traced distinctly down to the groin. Here then we had a train of phenomena, such as ordinarily occur in paralysis affecting the right lower extremity, and along with this an obstruction to the circulation in the thigh and leg. From these circumstances we made the diagnosis of obstruction of the right iliac and femoral arteries. On dissection we found that the aorta was healthy to within about six inches of its bifurcation; below this point it was partly filled by a red clot. The left common iliac was healthy, but the right was plugged up with a dark red clot, which extended into the internal iliac and obturator arteries, filling up also the femoral and its branches. The case, in fact, was nothing more or less than one of chronic arteritis.

This remarkable form of disease has been also observed by other authors. You will find it well described in Rostan's work on diseases of the brain, where he mentions that this loss of sensation and motion in a limb is sometimes produced by obstruction of its vessels. In persons advanced in life, the arteries are also frequently obstructed by the formation of ossific deposits within them, producing loss of power, coldness, and diminution of sensation, as in the foregoing case. A similar effect may occur from the pressure of an adjoining tumour on the trunk of a principal artery.

Paralysis resulting from disease of the arterial system is distinguished from paralysis caused by cerebral disease, by the following marks: first, by the colour of the integuments of the affected limb, which, in a case of the former description, are generally of a violet hue, or of a much deeper tinge than in the latter case, or in a state of health. It is very rare to find the two limbs of the same colour, as we do in cases of cerebral paralysis. Another mark is, that the temperature of the limb is always lower than that of the healthy one; but the distinctive sign of this form of paralysis *is the absence of pulsation in the arteries in parts where it should be naturally observed.* If to this description you join the absence of cerebral symptoms, you will seldom fail in making a correct diagnosis. I have had two cases of this disease under my care; one of them occurred in the upper, the other in the lower, extremity, and, from observing the characteristic marks already detailed, I had no difficulty in making the diagnosis. It is to that peculiar form of this disease, which is considered by some authors to depend on ossification of the arteries, that the name of "Pott's Gangrene" has been applied. A great deal of light has been thrown on this disease by the researches of modern pathology. It is now pretty well established, that we may have this gangrene, not only in old persons from ossification of the arteries, but also in the young from arteritis. In truth, the pathology of Pott's gangrene appears to be one of two changes,—either an arteritis or ossification of the arteries themselves; and of these two causes the first is by far the most frequent. You will see at once the importance of this view of the question, for if the gangrene occurs in a young person, and is connected with inflammation of

the arteries, it is a disease more or less under the control of medical treatment; but if it be produced by ossification of the arteries, the results of treatment are far less likely to be successful.

We have, then, in a case of paralysis of this description, more or less loss of sensation and motion, coldness of the limb, and absence of arterial pulsation. With respect to coldness, it may be said that it is of little value as a sign, being frequently observed in cases of cerebral paralysis. To this it may be replied, that though coldness is sometimes present in cases of ordinary paralysis, still it is never so remarkable as in this form of the disease, and the temperature of the limb is but a few degrees below the standard of health. Dr. Abercrombie makes a very interesting conjecture on this subject. He says, the temperature of paralysed limbs is generally considered to be lower than that of the healthy ones, and, indeed, such is the case; but the true explanation of this occurrence is, that in this condition the limb loses its power of preserving a medium temperature, and hence it is that, according to the temperature to which it has been exposed, it becomes hotter or colder than the healthy limb. A case is mentioned of a medical man who laboured under paralysis of one of the upper extremities. This gentleman, on one occasion, after having applied some warm bran to the paralysed limb, was astonished to find, on touching it with the sound hand, that he could not bear the heat, though he was at the same time unconscious of any increase of temperature in the paralytic extremity.

The symptoms, then, of this form of paralysis, are diminution or abolition of sensation and the power of motion, a dark or violet hue of the skin, remarkable coldness, and absence of pulsation in the arterial trunks which supply the affected limb. These, with a tendency to the formation of gangrene, are the characteristic marks of the disease, and, by bearing them in mind, you will seldom err in making a diagnosis. In the great majority of cases the disease is confined to one extremity; but Rostan gives some cases in which it was more general. We might also add to the diagnosis, that paralysis connected with disease of the brain often comes on suddenly, while, in this case, its invasion is slow and gradual. It is however, true, that some cases of paralysis, depending on this cause, have come on so suddenly, as to render this circumstance of less value as a diagnostic.

With respect to the treatment of this form of paralysis, if the patient be young and the disease recognised at an early stage, it is possible that you may be able to arrest it by free local depletion and other antiphlogistic means. In the case which was under treatment in the Meath Hospital, the symptoms had lasted for a considerable time before the disease exhibited any remarkable violence. The man was admitted on the 7th of February, and at this time the disease had been five weeks in existence, having begun at the lower part of the limb, and extended gradually upwards until it involved the whole leg and thigh. Yet it is very probable that this patient might have been saved, if proper means had been taken to arrest the inflammation of the vessels at an early period. Baron Dupuytren has published a case, in which it appeared that this disease was setting in, but was checked at once by bold antiphlogistic treatment directed to the affected limb.

CLINICAL LECTURES ON SURGERY,

DELIVERED AT

THE HOTEL DIEU, PARIS,

BY BARON DUPUYTREN,

PRINCIPAL SURGEON OF THAT HOSPITAL.

Corrected by himself.

Gun-shot Wounds—Effects of Fire-arms in general—Modification of Projectiles—Distance at which the Wound is received—Deviation of the Projectile from its natural Course—Elasticity of Garments—Use of—Remarkable Phenomena from the different elasticity of Organs—Chewed Balls Poisoned Balls—Formation of Cysts—Serous Cysts—Mucous Cysts—Extraction of the Ball—Obliteration of the Cyst, &c.

Gentlemen,—There is not, perhaps, in the vast province of surgery such a complex subject,—one which combines so many practical questions, the diagnosis and treatment for which require of the surgeon such extensive knowledge, such rectitude in judgment, such ingenuity of execution,—as war arms in general, but more particularly gun-shot wounds. In spite of the numerous accidents that have been submitted to my care, arising from sporting, public fêtes, duels, and suicides, for many years, there would have been some difficulty in establishing a practical theory, as these were isolated cases, arising, for the most part, by the same arms, the same projectiles, the wounds presenting similar characters, or occupying the same regions. But the misfortunes of our country in 1814 and 1815, the glorious but bloody engagement of 1830, and the deplorable struggle of 1832, have given me numerous opportunities of seeing and treating all kinds of wounds inflicted by fire-arms, from which I will endeavour to point out to you the results of my own experience.

Before speaking of wounds, I will enter into a few details on the effects of fire-arms in general. It will be much more simple afterwards to explain established rules for the ravages they occasion on living bodies. These effects depend on two principal circumstances: the manner in which the fire-arm has been charged, and the distance from which it has been fired. If a musket is merely loaded with powder, without its being rammed down, the

explosion taking place is but slightly burning, but sufficiently powerful to violently bruise the skin, if it is discharged at a short distance. If the gun is loaded only with powder, and that has been rammed down with greater or less force, the effects will vary according to the degree of resistance and distance of the body struck. The following is a fact, and one that I had occasion to witness. Two individuals quarrelled: one of them, being in a great rage, discharged a musket only loaded with powder at the abdomen of his adversary, who instantly fell down dead. The distance at which he fired was only about one or two feet from his companion. On being called upon to state the cause of death, we found, on examination, his garments torn, a large hole in the parietes of his abdomen of more than an inch in diameter, and the intestine was exposed. The contents of the gun were in the centre of the abdomen, and no other opening was discovered; it was also proved that the fire-arm contained only powder. Many other facts of the same kind are well known to have taken place. It also frequently happens with those who are about to commit suicide, to forget to place a bullet in the pistol, from their agitated state of mind. The different walls of the mouth are violently distended from the rarefaction of air. Sometimes the contents pass through the palatine vault. If the charge passes backwards, the vertebral column is not the least damaged, though the velum pendulum palati may be torn; sometimes, also, the inferior maxillary bone itself is broken. Every body is aware, that if a certain quantity of water is put into the barrel of a gun, and projected with force, it is sufficient to stun, and even to kill, birds. If a candle be placed in a gun, and the latter fired, it will, at a short distance, perforate a tolerably thick plank. The extreme swiftness impressed on the soft body supplies here the density which it requires, and surmounts the force of cohesion of the wood. A handful of coarse kitchen salt put into a gun, and fired at a common distance, if it has been only loaded for a few instants, will produce great inconveniences; but should the salt have had time to concrete, and be fired at a short distance, it would inflict a serious, or even fatal, wound. Small shot of different sizes acts in two ways; it either strikes in a mass, or, as is commonly said, forms a ball, which depends on the goodness of the gun, and the shortness of distance at which it strikes its object; or else the shot becomes scattered, and falls separately. In the first case its action is very energetic, and produces on the living body effects more formidable than a single ball. It was by this means that the son of Marshal Moncey was accidentally killed; and every year during the sporting season, either from imprudence or unskilfulness, fresh accidents from a similar cause take place. Very frequently we find a single ball traverse the lungs without causing death, whilst a charge of shot lacerates these organs, and invariably destroys life. In the second case, that is to say, if the shot be received at a distance, it is very rarely that a serious accident results from it. An eye wounded by a shot becomes generally useless. If the heart, stomach, or intestines, are the parts penetrated, serious symptoms might arise, but this kind of projectile rarely penetrates further than the subcutaneous cellular tissue.

Deer shot, and balls of small calibre, do not produce less ravages, when they are received at a proper distance, than bullets of ordinary size; only, as in general there are many of them together, a greater number of wounds are inflicted, and thus increase in proportion the danger. I may remark, also, there are many guns, especially those used in sporting, that carry badly their ball, which immediately deviates from its course, and soon loses its velocity, so that there is neither certainty for him who draws the trigger, nor much danger for the object of his mark. This observation applies to a great number of facts.

As we shall have to examine more particularly into the effects of gun-shot wounds produced by munition, it will be necessary for me, in the first place, to glance over the modifications which the projectiles undergo in their march following the degree of their velocity, their direction, and the different points of distance they have to travel. The velocity of a ball gradually diminishes from the moment it is sent forth from the gun till it falls to the ground. Air opposes to it, in the first place, a certain degree of resistance, which causes it to deviate from a straight line, and lessens its rapidity. Every body against which it comes in contact causes it to lose a certain portion of its swiftness, and even sometimes suddenly checks it; if its weight and solidity surpass the force of the ball, it becomes motionless. But this arrest takes place only when the projectile arrives perpendicularly on the plane surface which it encounters. If the shock has taken place obliquely, the ball becomes reflected, following a more or less open angle. These common philosophical principles should be borne in mind, for they explain a number of very remarkable circumstances that happen in gun-shot wounds, and we shall have frequent opportunities of applying them. It will be useless for me to lengthen the subject on the different degrees of resistance that various bodies present, in consequence of their nature, their density, and their form. There is, however, a remark, which I believe worthy of notice, it is, that armour is not, under all circumstances, ball proof, as is commonly believed. During the three days of July, a soldier, wearing a coat of mail, was killed by a bullet from a musket; the ball traversed the mail in different parts, precisely on its prominent angle situated opposite the sternum.

The action of grape-shot, of the Biscaian guns, and cannon-balls, differs from those of the ordinary bullets, of which I have been

speaking, only from their considerable mass, and from their irregular form, and especially from the immense impulse that they receive. On these different points I will return to hereafter.

The second principal circumstance which has an influence over the effects of fire-arms, is, as I have previously stated, the distance at which the contents are received; this must easily be conceived. At a very short distance, the body struck receives not only the projectile at the moment of its greatest impulse, but also the whole force of the exploding, with the wadding that is used with the charge. There is at once, if the body struck is susceptible of it, burning, laceration, and enormous attrition. At a greater distance, so that the ball alone reaches the marked object, the action would be still greater, as the ball is further removed from the bound of its course. It would cause a concussion proportioned to this overplus of power, and would produce symptoms more or less serious, according to the nature of the parts. Finally, the projectile, having arrived at the conclusion of its impulse, would produce only a slight impression, contusion of the living parts.

The action of balls otherwise presents remarkable peculiarities, in consequence of their deviation, caused by the form of bodies struck by them. If they strike obliquely a cylindrical body, they are reflected in a similar manner as when they hit against a plane surface. If, on the contrary, they encounter the extremity of a diameter of a half hollow cylinder, they follow exactly the curve that it describes, and continue their progress to the other extremity of the diameter. From this we may easily conceive, then, that a ball may return from the point of its departure, and wound in its return him who fired the musket, if it is only at a short distance, or any other person placed in the new direction of the projectile. The head and chest of men present a very marked cylindrical form, and it frequently happens that a ball strikes on one of the sides of the forehead or chest, passes between the skin and bone, and departs at a point opposite to which it entered, without producing any internal lesion.

It was believed that these regions were traversed in different parts, when, on the contrary, the projectile has described a curve following either the external surface of the ribs, or the external surface of the calvarium. This phenomenon is, without doubt, owing to the resistance of the skin, which is very elastic and at the same time very solid, opposing itself to the reflection of the ball outwards.

All bodies, possessing great elasticity, resist more or less the action of balls. Garments, especially those made from wool, protect, to a certain extent, the parts that they cover. On this subject I have several remarks to make. We observe that a hole made by a ball in garments is always much narrower than that which exists in the corresponding skin. Frequently even we find the ball to have penetrated some depth in a limb, without perforating the garments. In 1814, a French soldier, wounded under the Parisian walls, was received at the Hôtel Dieu. On examining the superior part of his leg, we found fragments of cloth imbedded in the femur. After many manœuvres, a sort of wad was extracted, containing a ball, entirely enveloped in a portion of the gaiter of the patient. The piece is at the present time kept in preservation at this hospital. Amongst the wounded received in the Hôpital de la Pitié in 1830, one of them offered an analogous circumstance; a ball had penetrated the abdomen, and pushed in front of it the shirt, which was not the least torn, and which materially assisted in its extraction.

This patient perfectly recovered. The difference of size between the openings of the garment and that of the skin, depends, as I have before said, on the elasticity of the parts. It was in not understanding this principle that Charles XII., King of Sweden, who was killed in consequence of receiving a bullet in the head, was said to have been assassinated. The ball had pierced the border of his hat, and penetrated through the anterior part of the cranium. The hole in the hat being so much smaller than that in his forehead was the cause of this suspicion.

The difference of elasticity of organs explains also, many other remarkable phenomena. A projectile, half-spent, strikes obliquely a round surface, as the thigh for example, and continues its route, without leaving the least trace of its passage, on even the breeches of the wounded. However the limb loses its power, becomes numb, the patient falls, and when the thigh is examined, we find the femur fractured, all the surrounding soft parts much contused, though the skin remains unaltered. This is owing to the muscles, which at the time of the blow are in a state of tension, consequently their fibres are more easily lacerated; the skin covering them is not so easily ruptured, and frequently even entirely resists, though the subjacent parts are torn and lacerated. If, instead of the limb, the chest is the attack of this enormous contusion, death instantly takes place, and the surgeon must make a very attentive examination in order to discover its cause. It is in cases of this kind that they have attributed the wound to the *vent du boulet;* that is to say, to the action of air, violently forced by the projectile. This opinion, though generally believed by military men, is, as we have just seen, completely erroneous.

The ball, by striking bodies of greater or less density, may undergo different modifications as to its form, become flat, broken in pieces, and produce in this way wounds which are scarcely to be described. A man was struck with a ball on the lower part of his right leg, it fell against the prominent crest of the tibia, and broke in two pieces; each of

these, after traversing a little of the soft parts, lodged in the calf of the other leg, which was behind the first. Thus you have five openings made by a single ball. Cases of this kind are not rare. I saw in July many citizens who were wounded by the splinters of a ball, which had struck a piece of iron situated a short distance from them. These irregular fragments were lodged in the skin, some deeper; the injury inflicted by them was according to the irregularity of their form. The wounds are somewhat similar to those produced by grape-shot. Projectiles from the Biscaian guns also meet frequently with bodies of great durity, which cause them to splinter in pieces, from which are produced very dangerous wounds.

Such are the ordinary effects of fire-arms, generally considered. We will now see if there are any circumstances, that are capable of adding to their danger. It is the public opinion, and one generally admitted by military men, that the enemy, in order to render the wounds more dangerous, make use of the *balles mâchées* (chewed balls). This opinion is destitute of any foundation, and it is easy enough to assure ourselves, that balls of this description cannot exist. What would result from them? The impression of the teeth would be marked on the metal, by small hollow cones, having a line of greater or less depth. The pressure exercised by the jaws, however powerful they might be, could not change the roundness of its form, and it is in consequence physically impossible that its introduction into the tissues of our organs can do any more injury than a common ball. There is not the least doubt, but they have attributed to the action of the jaws inequalities, angles, and various deformations, in a word, what projectiles undergo from a check against any hard substance, and even against our own bones.

Grooved balls, thrown from carbines, are not more dangerous than ordinary balls, only from their immense swiftness; the impulse given by them is so great that they will kill, from 12 paces to 150, more than double the distance of an ordinary gun. But frequently it happens in civil war that citizens arm themselves with common guns, and load them only with cartridge, intended for muskets. The balls not being able to penetrate into the narrow barrel, are hammered round, and thus made to fit the cavity of the gun. Projectiles of this nature known by the name of *lingots* (wedges) inflict large and dangerous wounds, by striking the object in the lengthy direction of the ball, and lacerate most horribly every thing that they encounter. The same remark applies to all projectiles, whatever may be their nature, which present angles and considerable irregularities. Their presence is borne with greater difficulty, their extraction is much more tedious and painful than that of a projectile, whose surfaces are equal and polished.

The violent symptoms which, in many cases, arise from gun-shot wounds, have caused many to believe in poisoned balls; and there are some, at the present day, who persist in this error. These foreign bodies do not act as poisonous bodies: their presence provokes and keeps up inflammation, which subsides only when driven away by suppuration, or extraction of the foreign body or bodies has been effected, such as pieces of clothing, the wadding of the charge, or sharp splinters from the ball. But sometimes we find that the tissues habituate themselves to the presence of those which are regularly formed, and are not of considerable volume. Balls have been seen to sojourn thus in the brain, in the heart, and in the most part of other organs. When this occurs, a very remarkable circumstance takes place. A sward like production at first forms around it, this becomes organised and forms a villous membrane, which exudes pus; but the membrane gradually gets thinner, and furnishes only by its internal surface a slight serosity. The foreign body, thus removed from the other living parts, may remain for ever without any inconvenience. Sometimes, however, it happens that this serous cyst becomes accidentally inflamed, matter forms, and an external opening is the consequence. A fistulous opening is thus established, and continues as long as the cause remains. This fact has given me a great number of opportunities of studying the state in which these bodies are found in the midst of our tissues. Always when they excite inflammation and suppuration, they are enveloped in a purulent cyst of a mucous nature, and, at the expiration of a certain period, a fistulous opening is established, which communicates either with an external or internal surface of the body. On the contrary, at all times, when there is neither inflammation nor suppuration, we find the foreign bodies surrounded by a cyst, the form of which is similar to the bullet, and its organisation is always similar to serous membranes. The cysts adhere, by one of their surfaces, to the surrounding soft parts, at the expense of which they have been formed; by the other surface they are in contact with the foreign body. In their cavities we constantly find, at first, a serous secretion analogous to that which lubricates the joints, afterwards the foreign body itself. This fact is not only curious, but also practically useful.

In fact, if in the operations for the extraction of these foreign bodies we are contented by taking them away after a simple incision of the cyst, and close the wound afterwards, so as to obtain if possible an unition by the first intention, we generally observe a new tumour produced, in consequence of a quantity of the serosity produced by the internal surface of the cyst. Consequently it is necessary, when we extract these foreign bodies, to destroy, at the same time, the cysts which contain them, or fill their cavities with lint, so as to produce inflammation and suppuration, and thus obtain adhesion of their walls.

But these foreign bodies do not, as I have before said, always remain stationary. In fact, although it is a singular circumstance, they become travellers. Their displacement may be slow or rapid. If rapid, they do not leave any trace in the passage through which they pass. If slow, they are surrounded with the serous apparatus of which I have spoken. This mobility does not belong only to pointed, smooth, or lengthened bodies, but also to those of a different form,—to spherical bodies for example; but, in general, it is much less in those bodies which approach the spheroid form. This travelling faculty, which foreign bodies possess, should not be lost sight of by surgeons. As it frequently happens they are displaced in the twenty-four hours, and a foreign body, that has been felt in the evening, the next day has been observed a long distance from the part where it was first discovered; so an incision should never be made for its extraction, unless the foreign body is felt the moment before the operation. These displacements generally take place from the interior to the exterior, from the intestinal canal towards the skin, and from the deep part of the limbs to the superficial; sometimes, however, though very rarely, they advance from the periphery to the centre.

It has been believed also, that a ball, driven by a combustible body, conserves a degree of heat which can only increase in consequence of the rapidity of its course. There would result from this, not only the characters which the wound usually presents, but also that of an extreme burning sensation. It is now a long time ago, since the celebrated Ambroise Paré showed the absurdity of this creed, by proving that the balls passed through a quantity of gunpowder without igniting it.

I will now apply the ideas I have given you in wounds properly so called. We must examine their general and distinctive characters, their degrees of danger, the different symptoms accompanying them, the particular causes which influence their termination, and the treatment necessary in each individual case in proportion to all the circumstances that I have now enumerated.

If the point struck by the ball is sustained by bones, as in front of the legs, or the circumference of the cranium, the skin may be ruptured, as in fact is ordinarily the case. In this case, the tissue is contused, inflames, ulcerates, and is replaced by a cicatrix. I have previously spoken of the baneful effects of a bullet which breaks the bone and lacerates its surrounding tissues, without altering the appearance of the skin. It is not, then, rare to see this latter membrane untouched, when even the muscles, viscera, &c., are reduced to bits, and the bones shattered. In a woman, wounded July 1830, the humerus was broken, but the skin remained perfectly healthy. In 1814 we received in this hospital a man who had his kidneys lacerated by a bullet. Nothing could be observed in this region except considerable swelling, but no lesion of the integuments; acute inflammation soon supervened, gangrene of the soft parts ensued, and on the autopsy we found the posterior portion of the bones forming the spinal canal broken into small fragments. In cases of this kind of course nothing can be done.

If the projectile, when in great force, strikes obliquely the surface of the body, it produces a lacerated wound, of greater or less extent, hollowed in the form of a gutter; less oblique or direct it penetrates the thickness of the parts, and, if half spent, it remains in the interior of the body. The wound then presents only one orifice, and, as Percy has remarked, the deeper we trace the hole the larger we find the cavity, which is occasioned by the continuation of the motion of rotation. We know, in fact, that, in the same manner as all spherical bodies thrown in a vacuum, projectiles from fire-arms are animated with double movements, one by projection, which follows a parabolical curve, the other by rotation on their axes, which survives some time the first. The combination of these two powers explains different remarkable phenomena. When a bullet is nearly spent, it rolls with lightness on the ground; but if it encounters an obstacle, it either turns it over, or the ball rises many feet from the ground. Thus, it sometimes happens, that young soldiers, wishing to check them, either with their feet or hands, have had their limbs violently contused, and frequently carried off. If the ball has sufficient force to pass though the body, its course is limited by two openings, that of its entrance being tolerably regular, the dimensions of which are in relation with the volume of the ball. Its borders are turned inwards, and much more contused than the edges of the opening from which it made its exit. This last is, most times, less regular, larger, its borders turned outwards, less contused, and more unequally lacerated. The skin, at the place of its entrance, finds a point of support on the subjacent parts, which renders more easy the solution of continuity, and prevents thus a laceration of its edges. It is necessary, also, to bear in mind, in order to explain this phenomenon, the loss of movement the projectile undergoes in traversing the tissues; for it results, when balls pass through solid bodies, they are divided much more neatly when the ball is gifted with an impulsion of considerable force. This difference of diameter between the exit and the entrance of the ball is the same in wounds of the cranium, and is not an exception, as has been believed from an incomplete observation by Ledran. This is an interesting preparation (*showing it*), and demonstrates the truth of what I have asserted. It is the cranium of a young man who shot himself with a pistol. The ball entered in the middle and inferior part of the coronal suture, struck the occipital bone at the opposite side, was repelled back by the elasticity of this bone, which, though shattered,

was not carried away, and the ball was found afterwards in front of the tentorium cerebellum. You can observe, that the opening made at the external surface of the coronal suture is neat, and only of the diameter of the projectile, whilst, on the contrary, that formed at the internal table is larger and more irregular. Behind, the fractured portion of the occipital bone presents still a much greater extent, especially externally. A very extraordinary circumstance has accompanied this fact,—though the ball had pierced the brain in different parts, he remained at first upwards of an hour in the *corps de garde*, was afterwards brought to the Hôtel Dieu, and died only three hours after the wound.

I will continue this subject in my next lecture.

Foreign Medicine.

ACADEMIE DE MEDECINE.

Sitting, Aug. 12th, 1834.

President, M. Boulay.

Re-union of the Perinæum, by Baron Roux.

Some months have now elapsed since I detained the Academy with a memoir on this subject; and more than twelve months have passed since I performed this operation for the first time. About six weeks ago, for the seventh time, I again performed this operation, in the presence of M. Chabanneau. The division had existed six years. The result of the operation surpassed my expectations, and the cure was even more speedy and complete than the cases I have previously quoted. In fact, in all my former operations there always remained, after the extraction of the ligatures, a small opening communicating with the vagina and rectum, and which had always been tedious of cure. In this latter case nothing of the kind happened; the perinæum and the recto-vaginal partition immediately united; so that, after removing the suture, the cure was complete, and, I may even say, too complete, for the union of the perinæum forwards had contracted slightly on the vulva; and, should this lady again become pregnant, it would perhaps be necessary to enlarge the vaginal opening by an incision. At the present time I have several other cases of the kind, the result of which I will communicate to the Academy.

Injection of Cerebral Matter into the Veins.

M. Dupuy added some facts to those which he had already presented to the Academy on the above subject. It is known that cerebral matter, when injected into the veins of animals the first time, produced death as rapidly as prussic acid. M. Blainville repeated these experiments. On two animals belonging to the Museum of Natural History, four ounces of diluted cerebral matter were injected into the veins occupying the fore legs; in two minutes the animals died, without even a convulsion. At the autopsy, we found, as usual, the blood coagulated in the vessels and heart. In the cavity of this latter organ existed clots as large as the fist; and so in relation with the valves as to prevent the least action of the heart. But a phenomenon, to which M. Dupuy called the attention of the Academy, is, on examining the chest, petechial spots, improperly called gangrenous, were discovered on the surface of the lungs; but these he believes were produced after death.

M. Chevallier asked M. Dupuy if he was certain that no other substance injected into the veins would produce the same effect.

M. Dupuy stated, that since the discovery of transfusion numerous injections had been tried; and he also had made a number of experiments, and, to the present time, he found only corrosive sublimate that would produce so speedy coagulation of the blood.

M. Rochoux recollected that MM. Gaspard and Majendie had killed animals by injecting different substances into the veins, such as oil, gum-water, &c., &c. Death took place from the obliteration of the pulmonary capillaries. Did not the cerebral injection act in a similar way?

M. Emery.—I observed the experiments of MM. Gaspard and Majendie, and have repeated them myself. When milk, serous fluid, or any animal or vegetable substance in putrefaction is injected into the veins, we observe hæmorrhages supervene, gangrenous blotches are observed on the lungs and in the intestinal tube. These symptoms are much more serious when the substance injected has a more energetic action; and putrefied animal matters produce symptoms of the greatest intensity.

M. Dupuy.—I was the first who made these experiments in France. As to putrefied

matter, when injected, the experimenter knows not what he injects. All those I have injected I have taken the trouble to analyse. I employed this animal matter, which had been exposed to the air for four years; I then obtained the same results as spoken of by M. Emery, and I differ only from him as to the nature of the spots which he calls gangrenous, for it appears to me that they are formed after the death of the animal; but, as to the other substances, such as gum, oil, &c., I deny that they are so hurtful. I have injected pounds of oil into the veins of large animals, as the horse, ox, and the ass; I made the gummy solutions and the oil of linseed so thick, that they were perfectly stringy; yet the animals did not die, although they were exceedingly ill. Lastly, the explanation of M. Rochoux as to the effects of cerebral injections is incorrect; there is no obliteration of the capillaries, but only coagulation of the blood.

M. Emery replied, that M. Majendie and himself had made experiments on dogs and rabbits. The difference of size and species of animal caused different results. As to the nature of the spots, he maintained that they were gangrenous; for, when the animal survived fifteen or twenty hours after the injection, these blotches were surrounded by an inflammatory circle. One fact cannot be destroyed by another.

Means of Compression in Chronic Buboes.

In order to adopt this plan, a large and solid compress is placed on the tumour, and fixed by means of an appropriate bandage. This compress should be continually imbibed in a solution of some vegetable mineral water, or any other astringent solution, and the patient confined to his bed. By this process, resolution of the bubo takes place ordinarily in forty-eight hours, unless the suppuration existed at the time of the use of compression. This latter circumstance does not interfere with the remedy, and the process of cure will continue, and the bubo become destroyed. Should the abscess break, the escape of the pus is to be facilitated by the proper adjustment of the compressive apparatus, and the walls of the abscess to be kept in contact with one another.—*Gazetta Ecclettica di Verona Marzo*, 1834.

Reunion of an Ear completely cut off.

BY DR. MARINI.

The Memoir for May of Filiatre contains the history of a man who entered a house of ill-fame, where, in a scuffle, he had his ear cut off. He picked it up, and withdrew from the contest. Dr. Marini, who saw him, reapplied the divided portion, before which he well washed the ear in diluted spirits of wine. The part was kept in its proper situation by means of four sutures; and, so as to be more exact in keeping it in its relative position, a piece of elastic bougie was placed in the external auditory duct, and the operation was terminated by means of bandages, adhesive plaster, &c. The next day the bandages were raised, so as to discover if there was any displacement of the parts, and M. Marini saw with pleasure a slight inflammatory blush on the borders of the reunion. The patient was slightly feverish, thirsty, had cephalalgia, &c. By the eighth day these symptoms had subsided, and the pinna had become of a natural temperature. The lobular portion was the first to unite, after which the extremities became adherent. The other parts putrefied, and suppuration continued till the cartilage was covered by fleshy granulations. In a month the cure was complete, and the linear cicatrix which remained was scarcely perceptible.—*Filiatre Sebezio di Napoli, Maggio.*

Wound of the Heart, in which the Patient survived Ten Days.

BY M. FRIS.

Balduni di Luigi, a robust young man, 26 years of age, had a dispute with his brother about some domestic affairs. In a combat which ensued, he received a stab from a knife opposite the region of the heart. From a statement of the persons who saw him immediately after the accident, Cataldo had, at the moment he received the stab, a considerable sanguine emission from the wound, his countenance became pale, his forehead was bedewed with a cold clammy perspiration, and a lypothymy ensued. Drs. Fris and Lojodice were immediately called. When we saw him, the patient presented the following appearances:— pallid countenance, feeble pulse, which sometimes intermitted, slight oppression and difficulty in respiration, much pain in the

region of the wound, from which a small quantity of blood issued; intellectual faculties not the least affected. Every possible attention was paid him, and the patient found himself every day improving, till one morning, ten days after the accident, he was suddenly taken in a fit of syncope, during which he died.

On the autopsy, we found that the wound had penetrated the left ventricle of the heart, and had even touched the wall opposed to the ventricle. A quantity of blood had in consequence escaped into the thoracic cavity, and from this death took place.

The cause of the prolonged life is explained by M. Fris, by a clot of blood forming in the cavity of the wounded ventricle, which closed the wound of the heart, and thus prevented the escape of blood.—*Filiatre Sebezio di Napoli, Maggio.*

Experiments on the Properties of Cubebs in Blennorrhagia.

BY DR. FENOGLIO.

We give the results from many observations reported by M. Fenoglio on the employment of cubebs in the treatment of blennorrhagia. This medicament is much less disagreeable than many of those which are prescribed in this affection. Cubebs increase the appetite, and assist in digestion; they never excite diarrhœa. This medicine appears to have a regular action on the urinary organs, it causes the urine to be red, and gives to it an odour *sui generis*. Its use never produces inflammation of the testicle, which is not the case with balsam copaiba. The best mode of administering it is in combination with the confection of red roses. A dose of three scruples a day is sufficient. In all the cases recorded in the memoir of M. Fenoglio, he has gained a cure by this means in three or four weeks, and the patients have only taken two or three ounces of cubebs.—*Annali Univers. de Medie, Dicembre,* 1833.

Extraordinary Effect from Music.

In the Medico-Chirurgical Catalogue of Turin, there is a very interesting account of a woman, 28 years of age, over whom music produced a very extraordinary effect. This woman, it appears, had never left her village, or ever heard a concert. In the month of October, a ball was given in the village, and for the first time they danced to choice and picked music. The *fête* lasted three days, and the ball continued nearly the whole of the time. The woman, the subject of this observation, danced all the while, and entered warmly into the pleasure of the tunes, but, when the music had finished, the impression on her mind was that it continued. Always, whether eating, drinking, or in bed, the different airs that she had heard kept so distinctly in her mind that she could not sleep. She absolutely believed she could hear the repetition of the pieces that had been played, and actually the order in which one piece had succeeded the other.

The sleeplessness caused an alteration in the digestive apparatus, as well as all the other functions, and it became necessary to have medical advice. All doctrine was in vain; nothing could calm this strange affection. On the contrary, the musical sounds became more distinct, her appetite failed, diarrhœa ensued, and nocturnal perspirations supervened. Her pulse was generally regular; sometimes, however, it would present an intermitting character. At the end of six months she died in a complete state of marasmus, without having one moment's repose from this incessant musical sound, and which became more and more intolerable. One of the violins was tuned in the presence of this woman, the discordant notes of which, at the last moments of her life, were produced in her ears and then she held her head between her hands and frequently exclaimed, *Oh! quelle fausse note! elle me fend la tête.*

Monstrous Fœtus.

M. Velpeau presented to the Royal Academy of Medicine, in the name of Madame Mercier, midwife, a monstrous fœtus, which presented neither trace of anus, nor genital organs; instead of the latter, there was a small imperfect tumour. (MM. Velpeau and Ollivies, of Angers, commissaires.)

Reviews.

The Dublin Journal of Medical and Chemical Science, including the latest Discoveries in Medicine, Surgery, Chemistry, and the Collateral Sciences. No. XVI. Vol. VI. September. Hodges and Smith.

The present number is not only equal to those which have preceded it, but even excels them in the practical portion of its contents: they demand from us a careful analysis. The first communication is from Dr. O'Beirne, "On Hydrocele of the Neck, with Cases and Observations." This form of disease was accurately described by Professor Maunoir of Geneva, about twenty years ago, in a memoir presented to the Royal Institute of France, in which were embodied the reports of five cases, with the modes of treatment the professor had found successful. The paper was transferred to the Academy of Sciences, where it met with an unfavourable reception. The pathological description of the malady, and the principles of treatment, were objected to; hence the subject fell into oblivion. Since that period, three similar cases have been published by Delpech and Lawrence, but without any reference being made to those of Maunoir. Dr. O'Beirne has met with three cases, the history, symptoms, and plan of treatment of which he has detailed, in addition to Maunoir's. The disease consists in the formation of a tumour, situated between the skin and fascia, at the side or front of the neck. At the commencement it is small and hard, but not painful; it gradually enlarges, so as in some cases to acquire an enormous size. Its figure varies. In nine cases out of ten it has occurred on the left side. It may originate either immediately above the sterno-clavicular articulation, over the thyroid gland, or over the parotid. After it has made some progress, fluctuation can be recognised, appearing as if fluid was contained in cysts. Pulsation in it is absent, even when placed over the carotid artery. Deglutition and respiration usually suffer.

The disease, according to Dr. O'Beirne, has been confounded with bronchocele, and which, on a superficial examination, might not be distinguished. But the irregularity of its origin, the fluctuation, the distance at which, in some instances, it arises from the thyroid gland, stamp the distinction most unequivocally. Baron Percy, who reported to the "*Academy*" the results of Maunoir's cases, believed the tumour to be "solid bronchocele becoming converted into an aqueous tumour." The circumstance of the thyroid gland being in each case in a healthy condition, negatives at once the assumption—bronchocele being of course a disease of that structure. The fluid, contained in the tumours, was of a brown coffee colour, occasionally streaked with blood.

The treatment consists in evacuating the contents of the tumour by a trocar, and afterwards carrying a seton through its long axis, so as to produce adhesive inflammation and obliteration of its cavity. Maunoir employed the seton, consisting of but a single thread, and to this circumstance Dr. O'Beirne attributes, and we think justly so, the non-evacuation of the matter in one or two cases; and, on account of the smallness of the incision through the integuments, the skin became healed before the deeper seated parts; hence, the infiltration into the celullar tissue which supervened. Dr. O'B. recommends the fluid to be first evacuated by an incision, and afterwards the seton to be employed, armed with a skein of silk. To facilitate the introduction of the seton, he advises, previous to puncturing the tumour, that the integuments be divided at the two points where the seton is to pass through. A cure by these means is readily accomplished. We strongly refer our professional brethren to the essay itself—this is but a brief outline.

Art. II.—*Observations upon the Operation of Excision of the Cervix Uteri, with an account of a Case of Abscess within the Cavity of that Organ, and a detail of Two Cases of Uterine Excrescence.* By John Browne, M.D.

This is an essay which was "Read at the Dublin Chirurgical Society." The first portion of it is a *fac-simile* of Lisfranc's Lectures on the Diseases of the Uterus, on which we need not, therefore, dwell. Dr. Browne doubts the necessity of the operation in some of the cases (where the mouth and cervix only were affected) in which it has been performed, and believes local applications might have removed

the disease. He relates some cases of polypi of the uterus, but of little interest. In a case of a small excrescence in utero, about ℥j. of pus flowed from its cavity during the operation of extracting the mass. Abscess in the cavity of the uterus seldom occurs, and its existence can be known only by the evacuation of matter.

A Case of Fungous Hæmatodes of the Vulva, by Dr. Thwaites: occurring in a young married woman, and supposed to be the consequence of a blow she had received some months previously. The tumour acquired an immense size, measuring in circumference 37½ inches. The case is accompanied by a plate, which is a pretty faithful picture of that dire disease. There was the absence of the tunic which generally invests the tumour. Some interesting reflections follow as to the nature of these morbid growths, and the cause of their origin. Dr. Thwaites believes that there is a predisposition in the system of those individuals, thus affected, and which merely requires to be roused from its dormancy by some exciting cause, as a blow, &c., for the malady to develop itself.

(*To be continued.*)

ART. IV.—*Observations on the Treatment of Various Diseases.* By ROBERT J. GRAVES, M.D.

We meet again Dr. Graves with great pleasure,—a sound practical physician. He possesses all the necessary elements. An excellent anatomist, one of the first physiologists in Europe, a mind replete with all the scientific information of his day,—how can his observations be otherwise than instructive?

The first article is "On effusion of Air within the Chest in Inflammation of the Lungs." A gentleman, 40 years of age, of robust frame, and full developed chest, was attacked with inflammation "in the inferior portion of the right lung," which advanced upward, until the whole became involved. "As the inflammation extended, the inferior portion of the lung became engorged with blood, and totally impervious to the air, and consequently the part of the chest corresponding to it every where yielded a dull sound on percussion, while the superior part of the right side was as sonorous, when percussed, as the left or healthy side of the chest." This was on the third day of the disease. "On the morning of the fourth day, a remarkable change was found to have occurred in the course of the night; anteriorly the dulness of the lower portion of the affected lung still continued, and indeed could not be greater, but from a little below the right mamma, as far up as the clavicle, which region at the preceding visit was naturally sonorous, the chest yielded a preternaturally clear and hollow sound, that at once attracted the attention of Dr. Marsh and myself; for, twelve hours previously, no such morbid clearness had existed. No respiratory murmur whatever could be heard in this region, and consequently we were led to the conclusion, that the subjacent lung was here pushed back, compressed by air effused into the cavity of the pleura." The left lung was healthy, and presented the "puerile respiration." Of the existence of air in the right pleural bag, Dr. Graves was convinced; but the source of the air was not so obvious. From the history of the disease and the character of the patient, he could not suspect the pre-existence of tubercles, therefore a communication through this medium, between the air-tubes and the cavity of the chest, was not probable. The presumption, therefore, after carefully weighing all the circumstances, was, that the air had been secreted by the inflamed pleural membrane. The inference was feasible, because founded upon physiological data. In sixteen hours the air had become absorbed, "and its place occupied by the inflamed and engorged lung." In a few days the patient had recovered.

"Bruit de soufflet, and throbbing of the Chest in Inflammation of the Lungs."—In the preceding case *bruit* of the most distinct and loud character was present over the anterior surface of the chest.. "*This bruit did not exist in the subclavian or carotid arteries.*" It was not audible until the disease had made some progress, and the intensity of it was in a ratio to the violence of the pneumonic symptoms. Dr. Graves remarks that bruit seldom accompanies pneumonia; in corroboration of this he refers to Laennec, who had not mentioned it. "Now, in the case before us the bruit was evidently not connected with the state of the nervous system, but with the state

of the pneumonic inflammation." There was also noticed, in this case, that violent throbbing of the chest in pneumonia, "and which Laennec considered as caused by the impulse of the heart, transmitted through the hepatised lung." This explanation Dr. Graves regards as unsatisfactory. The throbbing simulated aneurismal pulsation. He regarded the lung as in a state of *engouement;* the cellular tissue permeated with fluids, its vessels capacious, and the impulse of the heart extending along these tubes, thus causing, at each stroke of the heart, an elevation of the lung.

(*To be continued.*)

Fragmenta de viribus Medicamentorum positivis sive in sano Corpore Humano observatis. A SAMUELE HAHNEMANN, M.D., &c., &c. Edidit F. H. QUIN, M.D. Londini, 1834. pp. 212. Highley.

HAHNEMANN was the first promulgator of the homœopathic doctrine, a doctrine unparalleled in the literature of medicine. Only one of its absurdities is advocated in the present opusculum. The work contains—1. The names of some of the articles of the materia medica, with their officinal preparations; 2. An enumeration of the symptoms produced on the *healthy body* after the exhibition of each preparation, with the duration of its action; 3. And, lastly, a general account of similar observations, casually made, by other individuals, in Britain, as well as on the Continent. It is an endeavour to prove that those medicinal agents which remove certain *diseases*, or individual symptoms, will, when administered to a *healthy* body, produce the identical morbid phenomena. How far this principle may be correct, requires the concurrent experience of a great number of individuals and occupied ages to verify. It is admitted that bark will cure ague, and that sulphur is a specific for itch; and the advocates of this system boldly affirm, that any of the preparations of cinchona will produce ague when given to a healthy person, and also that sulphur will produce itch. Digitalis is an acknowledged remedy for palpitation of the heart. Digitalis, according to Hahnemann, will produce it. Capsicum annuum, it is asserted, will cause "inebriatio," ergo, capsicum annuum is a remedy for drunkenness. The lytta vesicatoria, when given to a healthy individual, will create all the multiplied maladies of the urinary apparatus; therefore, when the maladies exist, lytta vesicatoria will cure them.

Opium, Hahnemann tells us, will cause anorexia, incubus, sensibilitas diminutior, &c., and that, when these symptoms exist, opium is the remedy. Really, the doctrine is based on such a mass of absurdities and incongruous assertions, that if it were not from an ardent desire to encourage the cultivation of science, we should unhesitatingly pronounce the system, and the present volume, to be the productions, not perhaps of a madman, but certainly of a wild and speculative enthusiast. It would not be *passing strange* that such notions *are* correct, and that they had not *before* been discovered: this is not at variance with the history of science and philosophy; but it *is* extraordinary that any man, either for the advancement of science or for fame, should have exposed himself and his friends to such a multitude of ills as "*flesh is heir to.*" That any man in his senses should take aconitum napellus, and sustain the development and the continuance of its action for a number of hours, creating symptoms which occupy, in their enumeration, from six to seven octavo pages, does appear to us an anomaly in nature. If Hahnemann be a man of science,—if he be an attentive observer of nature, and an original thinker, by thus wittingly exposing himself to the ravages of disease, he is warring against the decrees of nature, and committing an injury on the community. The editor appears not to have altered the original text, but has occasionally added a note in the margin, illustrative of the periods which certain of the articles he has himself noticed continue their operations.

Illustrations of the Natural History of Worcester. By C. HASTINGS, M.D.

It was said by one of the greatest of metaphysicians, that the "chief study of mankind is man;" and the axiom is applicable as well to his physical conformation and its dependencies as to his mental condition. Every species of knowledge which can ameliorate his sufferings in this transitory abode, earnestly claims the attention of the physician. The world by which man is surrounded, the air which he breathes, the food which he receives, the plants which spring up around him, the animals

which it supports, and the relative longevity of its population in every county and town, are topics which should be duly considered by every medical practitioner. He has entrusted to his care, daily, the lives of his fellow men; he has to remove, by proper applications, or to alleviate, maladies originating from various sources. It is his imperative duty, therefore, to make himself acquainted with these sources; to analyse all the elements about him; to ascertain what agents are noxious to the human body, and to suggest means for their removal. If medical men would but investigate the latent causes of disease, human suffering might more readily be alleviated, and life be prolonged. If they were to do this, they would be conferring insuperable benefits on society.

This Dr. Hastings has done for the county of Worcester, and the present production proves that few men are more competent. We trust that it may give an impulse to others to pursue the same investigation. To the practitioners in Worcestershire this must be an invaluable, as well as an interesting work.

Anatomie Pathologique du Corps Humain; ou Description, avec Figures Lithographiées et Coloriées, des diverses Alterations Morbides dont le Corps Humain est susceptible; par J. Cruveilhier, Professor d' Anatomie à la Faculté de Médecine de Paris. (15me, 16me, 17me, 18me, 19me, livraisons.)

Pathological Anatomy of the Human Body; or a Description of the Different Morbid Alterations to which the Human Body is subject; with Lithograped and Coloured Plates. By J. Cruveilhier, Professor of Anatomy to the Faculty of Medicine, at Paris.

15th Number, Six Plates, Twenty Pages of Letterpress.

1st. *Apoplexy of New-born Infants.*—M. Cruveilhier informs us that he has ascertained, by actual examination, at the Maternité, that apoplexy is the cause of the death of one-third of those infants, who perish during parturition. He has observed it in almost all those cases commonly ascribed to asphyxia or congenital weakness, and he says he is firmly convinced that the appearances generally given, as marking the difference between asphyxia and apoplexy, are unfounded.

2ndly. *Diseases of the Lungs, the Thymus Gland, and the Pancreas in the Fœtus.*—In his general considerations on the diseases of the ovum, M. Cruveilhier, supported by numerous facts, proves, and evidently with reason, that, independently of mal-formation or monstrosities, the fœtus, even while in its mother's womb, may suffer all the diseases of nutrition, all the acute and chronic phlegmasiæ, to which it is liable after birth, namely, pleurisy, pneumonia, peritonitis, &c. This article contains a very curious case of obliteration of the orifice of the pulmonary artery, in an infant, which survived five days.

The subjects of the third plate are, the diseases of the mouth, pharynx, œsophagus, and stomach, in new-born infants. Of the fourth, hydrocephalus in the fœtus; of the fifth, diseases of the brain; and of the sixth, hernia through the foramen ovale. In the fifth part of this number, our author signalises the case of a girl who died in her eleventh year, and in whom the cerebellum was completely absent. We believe that the subject of the case was addicted to Onanism, and it was brought forwards at the time as an argument against phrenology.

16th Number, Six Plates. Twenty-two Pages of Letterpress.

The diseases illustrated in this number are, those OF THE PLACENTA:—namely, hypertrophy, atrophy, inflammation, ossification, hydatids, and apoplexy; OF THE LIVER, consecutive traumatic abscesses, phlebitis. Our author is of opinion that visceral abscesses, following wounds and injuries of other parts, are dependent on capillary phlebitis of those viscera, which is consecutive on another phlebitis situated in a more or less distant part, and by means of which pus is carried directly into the course of the circulation. We cannot yield our faith entirely to this theory, when we consider that phlebitis in general runs a very rapid course, destroying the patient very speedily, and is marked by great constitutional excitement, followed by typhoid symptoms, while the consecutive abscesses proceed very gradually and insidiously, undermining the

system, rather than carrying it by force, as phlebitis does. Indeed many cases are on record, where the patients sunk from these affections of the viscera, more especially of the lungs and liver, without any serious symptoms manifesting themselves, until within a few hours previous to death. If, indeed, phlebitis were capable of causing these abscesses, why do we not see them in other cases, then, where there were previousin juries? Why do we not see them in cases of phlebitis after bleeding? or in those cases where an operation has been performed on varicose veins? We are rather inclined to believe that, where phlebitis has appeared after an injury, and there abscesses have formed, they are to be considered as co-existent complaints only, and not as cause and effect. The third plate is devoted to the diseases of the spinal marrow—the fourth to the displacements of the uterus—and the fifth to the diseases of the venous system. Here is brought forward an interesting case of dilatation of the subcutaneous abdominal veins, having a free communication with the vena porta by the medium of the umbilical vein, which was of the same size as in the fœtus. Dilatation of the subcutaneous veins of the abdomen is generally dependent on the obstruction in the inferior cava, and it is owing to the enlargement of these anastomosing vessels that the venous circulation is carried on.

17th Number, Five Plates, Twenty-one Pages of Letterpress.

The first plate is devoted to the *diseases of the brain* in the fœtus. M. Cruveilhier gives seven species of atrophy of the brain; but among these seven he ranks the cartilaginous induration of the brain, which he says is the consequence of chronic inflammation; and also the loss of substance which the convolutions undergo as the sequence of the red softening—*ramollissement rouge*—which complaint (the softening) our author designates capillary apoplexy, although every one, except himself, considers it to be one of the terminations of encephalitis. The second gives us the diseases of the bladder and prostate; and, in the corresponding letterpress, we find an interesting case of hypertrophy of the prostate. In the third plate, we find the affections of the muscles; among these, we have mentioned muscular apoplexy, and puerperal inflammation of the muscles and synovial membranes.

This latter complaint merits its especial attention for several reasons, because of its great tendency to suppuration, and also because it attacks successively a great number of parts without quitting those first affected. Puerperal rheumatism being often accompanied by œdema, it is commonly confounded with the *phlegmasia alba dolens*, which has always appeared to M. Cruveilhier to be dependent on phlebitis. Experience has shown that it is exceedingly difficult to prevent suppuration in puerperal rheumatism; and M. Cruveilhier justly adds, that the puerperal condition adds greatly to the danger of all diseases, and this more especially in a hospital, where the influence of miasma is superadded to those arising from the condition itself. "Suppuration has taken place, and yet hesitation is evinced in recognising the complaint (rheumatism); it is considered conquered in one part when it shows itself in another; and, on an autopsy taking place, the muscles are found to be separated and infiltrated with pus, the articular and tendinous synovial membranes full of the same fluid, and the articular surfaces deprived of their cartilages, and eroded."

In the fourth plate, we have the diseases of the intestines, and a case of diaphragmatic hernia related.

18th Number, Six Plates. Eighteen pages of Letter-press.

The second plate represents the diseases of the cerebellum, and of the processus annularis. The author gives two cases in illustration, and then proceeds to some general considerations on tubercles of the encephalon. He considers the tubercles to be a product of secretion, but he does not explain the nature of that secretion. He remarks "that cerebral tubercles, even of very considerable size, may exist without giving any indication of their presence. It is only on the appearance of symptoms of encephalitis, arachnitis, or acute ventricular hydrocephalus, that attention is drawn to the encephalon." Mr. Copland Hutchison, at page 285 of the second edition of his "Practical Observations in Surgery," gives a very interesting case, which fully bears out, at least as

far as one case can, this assertion, which by the by is not altogether unknown to the profession. Our author further adds, that he considers one of the most important signs of the presence of cerebral tubercles is the irregularity of the ataxia, remarked not only in the symptoms, but also in the progress of the complaint.

The third plate is consecrated to diseases of the ovaries. M. Cruveilhier gives his readers some general remarks on cysts of the ovaries, and cysts containing hair, which, he thinks, are more common in the ovaries than in all the rest of the body. He considers that extra-uterine conceptions alone fully explain the cause of their production.

The remaining portion of the letter-press of this livraison is occupied with the detail of two curious cases:—the first, a case of ovarian cyst, containing a fœtus encrusted with a calcareous phosphate, and mummyfied; the last, a case of mummyfication of the fœtus in the uterus itself. To these he adds some very interesting observations on these singular cases.

19th Number, Six Plates, Twelve Pages of Letter-press.

In the 2nd plate, we have delineated cancer and melanosis in a great number of organs, more especially the heart. M. Cruveilhier is of opinion, that in melanosis there are two things to be considered, namely, first, the pigment; secondly, the tissue in which the pigment is deposited. The pigment, the essential character of which is, that it contains a very large proportion of colouring matter, (carbon, according to Thénard, the colouring matter of the blood, according to Barruel,) forms very frequently a black substance, of the consistence of mud; sometimes it is in the liquid state; at others, again, it is in concretions of greater or less firmness. The melanotic tissue is areolar, fibrous tissue, the shining aspect of which contrasts with the black colour of the pigment.

M. Cruveilhier considers the dark colour of the normal fluids and tissues to depend on a melanotic disposition. With the dark colour of normal tissues, he classes the black pointing of the mucous membrane, a pointing which, in the plates of Peyer, reminds one of a beard recently shaved. Sometimes this colouring of the intestinal mucous membrane is so black, as to resemble Indian ink.

The third plate is devoted to monstrosities.

Practical Hints on the Treatment of Several Diseases. By John Peacock, M. D. Lond., Baldwin and Cradock. 1834. pp. 77.

We cannot analyse this work. It consists of a motley group of cases, narrated in the most extraordinary phraseology. The marvellousness of the cases, and the quaintness of the style, are its chief recommendations. It abounds in amusement; laughable stories, odd phrases, and silly remarks, fill its pages. Let us give an illustration. At page 40 is the following remarkable case.

"Henry Thompson, Esq., was brought up at Bowes, near Barnard Castle, where he has a brother at present. He was of that class called yeomanry; but about middle life he engaged with two others in a very extensive commercial speculation, and happening to succeed, they were immensely rich; and when this gentleman sent for me, he had a most sumptuous establishment of carriages and servants. Mrs. Terry, of Darlington, had requested him to put himself under my care, and he took a house about half a mile from Darlington; but whilst his house was getting ready, it came into his head to consult a noted physician at Newcastle, from whence he returned without experiencing any relief. This, he told me, was the thirtieth physician he consulted since the commencement of the disease, and the fiftieth surgeon. His disease was constipation of the bowels; he had been six months and two weeks without any discharge that he could call a stool, of any kind or consistence. When our patient was hungry, he swallowed any thing he took a fancy to; such as game, half-raw beef-steaks, rich soups, &c., &c., and about half an hour afterwards, he irritated his throat with two or three feathers, which made him disgorge what he had taken, and in a few hours he was fit for another meal. Sometimes he made a little urine, but very little and very thick, and about an orange colour; and some such orange coloured fluid came up with what he vomited; but it would have required the pencil of John Martin to have given any idea of the horrors which beset you when engaged in a *tête à tête* with this scarcely human being. The

cuticle was nearly the colour of very old mahogany, and adhered so closely to the bone, that a careless person might have mistaken it for veneering, or a covering of the bone with a dark pigment. Mr. Thompson was a man more than six feet high, with large bones, and so much emaciated, that I have proposed frequently as a query, whether it was possible to scrape an ounce of flesh off his bones from any part of his body; he could not ride upon the softest carriage-seat, so that when he attempted exercise, he rested upon his wife's arm, and could paddle about fifty yards in a day. Their house in Blackwell was surrounded with a high wall, and frequently the poor villagers had to pay for the gratification of their curiosity, by peeping into the garden when he was using exercise; for it was not uncommon for the women and children to take fits when they got a glimpse of him, indeed their screams were beyond description, and at length the gates had to be locked entirely. When you patted his sides with your fingers, you were conscious you were striking a large wallet of pebbles. He scarcely had any suffering which could be called pain. I examined him very minutely, and, among other questions, I asked him if he was ever sick, and he said never in his life; at this I could not help breaking out into a laugh in his face, for which he gravely rebuked me, for making his misfortune the source of merriment; but I certainly never had so pleasant a laugh in my life, for it immediately struck me that this monster of a skeleton might be made well; and, as it tickled my fancy, I laughed again and again; and I am not quite sure whether my patient did not send to Mrs. Terry, to ask if the physician she had sent him was quite sane; however, we commenced operations the very next day, and in less than two days he had discharged a full peck of excrement, which had a much nearer resemblance to a peck of black marbles than any thing else, as black as jet, and very little of the natural fœtor. I had put together a very weak purging mixture, of the common composition, two tablespoonfuls of which he was directed to take every four hours. Now, the practised physician will see the occasion of my merriment when it broke out, and if I had not told him what I was about, he would have put five or six grains of antimon. tart. to ℥viij. What were the fifty surgeons and thirty physicians doing during the last six months, that they could not hit upon a purgative as mild in its operation as manna is to an infant? for it really did not incommode him at all. He had not pain or griping. The only *alarm* rested with the *potters*, among whom our grape-shot made sad destruction. After this Mr. Thompson got his flesh apace, and left Darlington in good health, as many here can bear evidence of."

The book contains amusement, but not instruction.

Traité théorique et pratique des Blessures par Armes de Guerre, redigé d'après les Leçons Clinique de M. le Baron Dupuytren, Chirurgien-en-Chef de l'Hôtel Dieu, et publié sous sa direction par MM. les Docteurs A. Baillard et Marx. Tome 1me, in 8°. Paris et Londres, 1834. J. B. Baillière.

A Theoretical and Practical Treatise on Wounds inflicted by offensive Weapons; drawn from the Clinical Lectures of M. Dupuytren, Principal Surgeon to the Hôtel Dieu, and published under his superintendence, by Drs. Baillard and Marx. Vol. 1st. 8vo. Paris and London, Baillière. 1834.

(*Second Notice.*)

When we concluded our former notice of this work, we promised to resume our analysis, commencing with the article on Amputation, which said promise we now proceed to redeem.

The subject at present under notice has been rendered one of peculiar interest to the profession, not merely by its own importance, which is great, but also by the dispute between Mr. Guthrie and Mr. C. Hutchison, and by the more recent affair of Mr. Huskisson, with the discussions to which his fate gave rise; more especially with reference to the time at which it should be performed, on which the Baron says but little, yet that little is very decided. Our readers, therefore, will be pleased perhaps at having the opinions on this subject of so celebrated a surgeon—the well-named Astley Cooper of Paris—placed before them.

"Sect. 10th.—*Cases for Amputation.*—When a surgeon is called to a case of gun-shot wound, the first thing he has to do is to judge whether, from the situation of the wound, its nature, and the injury inflicted on the parts,

the limb may be preserved, or is so much affected, that its amputation is absolutely indispensable to save the life of the patient. He must steer a middle course between those who abuse this means and those who proscribe in almost all cases.

" A.—A simple wound, in which the ball perforates flesh only, does not require amputation, and this latter never becomes urgent in such a case, unless the wound, in consequence of bad treatment, want of assistance, or peculiar idiosyncrasy, which renders the disease rebellious to the best directed treatment, should be complicated either with sphacelus, fascial inflammation, or abundant excessive suppuration, which threatens the life of the patient, and which nothing can arrest. But, under a methodical, local, and general treatment, these sorts of wounds terminate successfully.

" B.—A comminuted fracture of the bones of the extremities by a ball is one of those cases which generally requires amputation, even when there is no other complication.

" When the principal bone of the limb is broken into splinters by a ball, it becomes difficult to decide the cases in which amputation should be performed. Here the knowledge of the scientific surgeon is often at fault. If the injury be not very great,—if the splinters are not too numerous, which may be easily ascertained by the finger, after having enlarged the opening,—if the soft parts are not too much lacerated, attempts may be made to save the limb, after having made incisions calculated to prevent inflammation by constriction, (*par étranglement,*) extracted the splinters, &c. The patient should be placed in the apparatus for compound fractures, and dressed regularly once or twice a-day, according to the abundance of the suppuration. The greatest cleanliness should be observed, and the patient may frequently be cured, especially when it is an injury to the upper extremities, and the sufferer is of a healthy, good constitution. Children recover much more frequently than adults from these kinds of wounds. Of this we have lately had proof in the Hôtel Dieu: many young persons, of 14, 15, and 16 years of age, seriously wounded, with one or two limbs broken by gun-shot wounds, have recovered perfectly, while many adults, much less seriously hurt, have perished.

" But the soft parts are much injured when there are many splinters scattered here and there in the muscles, and these latter are more or less lacerated, amputation must be performed without hesitation, especially if the principal artery or nerves of the limb are injured at the same time.

" Nevertheless, we still find some persons who recover in spite of these fearful symptoms,—in spite of this extreme injury of the soft parts, and fracture of the bones; and examples are constantly brought forward of soldiers thus wounded on the field of battle, and who have obstinately refused to submit to amputation, although told it was their only chance for life, yet have nevertheless recovered. There are few skilful surgeons who have not met with such cases in the course of their life; but these are exceptions which it is impossible to foresee, and which can never break the rule. * * * * There are some cases, indeed, so far beyond all human knowledge, that it is certain some limbs are removed which might have been preserved; but we may almost affirm, that if attempts were made to preserve all limbs in that condition, such as has been described, scarcely one or two in a hundred would be saved, and the rest would perish. These results are met with in private practice, and are much more likely to occur in the army, where regular stationary hospitals are rarely to be met with, and where it is impossible to give the patients the necessary assistance. In such cases amputation is still more strongly indicated, and affords the patient a better chance for safety.

" C.—Injury of a great joint; comminuted fracture of the osseous extremities; wound of the capsular ligament of the joints; laceration of the ligaments, &c.; imperiously demand amputation; for, in spite of the most methodic and rational treatment, the patients almost always perish, if recourse be not had to this measure.

" D.—Lesion of the principal artery of a limb does not require amputation, as it was formerly practised;—a ligature on either end of the wounded vessel will suffice; but when to this is added a comminuted fracture of the bones, the chances for success diminish fearfully, and amputation becomes almost inevitable. It is useless to bring forward examples

of persons thus dangerously wounded, who have recovered without loss of limb. The rule is not less certain, and experience every day confirms its truth. To justify the preservation of the limb in such a case, the fracture of the bone must be simple, which is very rare.

"We must nevertheless confess that we were successful in a case of gun-shot fracture of the tibia, with wound of the anterior tibial artery, in which a ligature was placed on the femoral.

"E.—The mere division of the principal nerves of a limb does not demand amputation; the unpleasant consequences, resulting from a more or less complete paralysis of a large limb, are not to be put in the balance with those produced by its ablation. This lesion therefore only requires amputation when tetanus comes on, and cannot be controlled; it may then be regarded as the last resource, sometimes useful, but generally inefficacious.

"When the injury of the nerves is complicated with that of the principal artery, amputation is not even then urgent; nevertheless, it must be acknowledged that the chances of recovery are very slight, since the limb is deprived of the elements of nutrition, for a time, at least, and of its sensibility and motion for ever; but if to these two accidents is added fracture of the bone or bones of the limb, or the removal of a considerable portion of the soft parts, amputation becomes indispensable.

"F.—Wounds made by cannon-shot are those which are most likely to cause injuries calling for amputation. When a limb has been completely removed by such a projectile, it is necessary to perform, first, amputation above the part injured; but there are many exceptions to this rule, for when a shot has carried off the arm at the shoulder-joint, with perhaps a portion of the scapula, a thigh at the hip-joint, all that can be done will be to render the wound as regular as possible; remove the detached pieces of bones, the eschars, and all foreign bodies, arrest hæmorrhage, and, in fact, place the wound in the best possible condition for preserving the patient from dangerous symptoms. Wounds of this nature are very dangerous besides, on account of the general shock * which accompanies them, the extreme inflammation which follows them, the enormous suppuration which is inevitable, the hæmorrhage which may take place and impede the cure, the difficulty which nature will have in forming so extensive a cicatrix, and, finally, on account of the internal diseases which are so common during the progress of the treatment. When cannon-shot have struck a limb, either in its middle or extremities, breaking the bone, whether the skin be intact or not, if the subjacent soft parts are mashed, contused, or lacerated, so that very high inflammation, excessive suppuration, or gangrene must supervene, amputation should be performed. When an enormous quantity of muscles has been removed from the limb, the vessels and nerves being torn and lacerated, amputation becomes again urgent, and it would be against all the rules of surgery and the sacred laws of humanity, to leave the wounded man to unheard-of suffering, and almost inevitable death, by endeavouring to preserve a limb thus injured."

Nevertheless it must be acknowledged that in many of the cases we have enumerated, it is often very difficult to declare that there is an indispensable necessity for amputation. Wounds from balls, cannon-shot, shells, &c., causing comminuted fractures, with extreme laceration of the soft parts, hæmorrhage in consequence of wounds of the principal arteries and veins of the limbs, openings into and lacerations of joints, &c., have been cured without amputation, so that conscientious but timid surgeons hardly know which side to take; works are full of examples of surprising cures after such wounds. But very often the surgeon has reason to regret not having operated, as the symptoms increase in severity, sometimes so rapidly, that it is impossible to have recourse to that measure afterwards. In the army, we ought also to bear in mind, in deciding this question, the frequent necessity for a long and painful journey, therefore, in

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* We see by this that the Baron agrees with Mr. Guthrie in his opinions as to the shock produced on the system, and is consequently at variance with Mr. C. Hutchison. We shall find hereafter that he recommends waiting until this be recovered from, before proceeding to amputate.—Rev.

doubtful cases, the operation ought to be preferred, for, in times of danger or embarrassment, a simple wound, like that of amputation, is more readily attended to, than one complicated with broken bones, injury of the joints, arteries, &c.

"Is it possible, in fact, in the disorder and tumult of battle, or in the midst of the numerous difficulties which are attendant on the *ambulances* for the carriage of the wounded, to perform those operations which may preserve the limb, to afford the wounded those minute attentions necessary for such wounds, to act, in fact, as if in a civil hospital, where order, silence, and tranquillity reign, and where every thing is to be had in abundance and facility? Military surgeons, therefore, who amputate for wounds of the principal arteries only, or for gun-shot fractures, are not to be blamed. They have neither the time necessary for those delicate operations and attentions essential to preserve the limb, nor the proper means of carriage, which is generally done in carts, or badly-hung conveyances, the repeated joltings of which drive the splinters of bone into the flesh, give rise to dreadful pain, increase the irritation, produce extreme inflammation, and render gangrene almost inevitable, and death almost certain.

"In less severe cases, where the surgeon is embarrassed whether or not he should operate, he must take the constitution of the patient into account, and must also remember the danger which patients, suffering from such complicated injuries, incur by remaining a long while in a hospital. This danger is diminished by amputation, which converts the wound into one of easy cure, and the development of fever and hospital gangrene is thus prevented; he must also remember that, in some circumstances, he would have to abandon patients labouring under such serious wounds, who would, therefore, remain some time without being dressed. After amputation this inconvenience is much diminished.

"G.—Finally, there are amputations which gun-shot wounds, at first thought curable, may require, in consequence of being complicated by unforeseen symptoms, as necrosis, caries, fistulæ caused by the presence of foreign bodies, and which it has been impossible to extract, and which keep up the suppuration, and exhaust the patient, deformity produced by bad callus, false articulations, atrophied, insensible, motionless, and useless limbs, covered with ulcerations and fistulæ, joints affected with white swelling, wounds which cannot cicatrise on account of their extent, &c., &c. The surgeon must here consider whether the condition of the patient is such that, if it were to continue, his life would be in danger, or rendered insupportable; he must weigh these considerations, and a thousand others, into the details of which we cannot enter, against the dangers of amputation, always a very serious operation, and which alone destroys many who undergo it."

Our author speaks very strongly against the sections of the ligature close to the knots; he considers that it acts as a foreign body, irritating the wound, and producing abscesses and inflammation. He recommends bringing them all out at an angle of the wound. He makes the mortality one in six.

In regard to the time at which amputation of the extremities ought to be performed, Dupuytren is in favour of immediate amputation after the depression and shock are gone off; a question which he regards as finally settled by the discussions which have taken place. He also recommends immediate reunion, at least, in primitive amputations, for gun-shot wounds.

In the second volume, M. Dupuytren will treat of arterial and venous hæmorrhage, traumatic fever, visceral abscesses, hospital gangrene, &c. Then will follow the history of cicatrices, and the wounds of each region of the body.

The two volumes will, therefore, form a complete and interesting treatise on wounds.

DUELLING FRANCE.

By a law recently passed in France medical men, attending duels in the performance of their professional duties, are exempt from all penalties previously incurred, and cannot be compelled to give evidence, although actually on the field. By the same law, the punishments respecting principals and seconds are much increased in severity. If a medical man in England attends a duel as such, he is liable to be punished equally with the seconds, and, therefore, in giving evidence, the judge always cautions him against stating that fact.

THE

London Medical and Surgical Journal.

Saturday, September 6, 1834.

REMARKS ON THE MEDICAL PROFESSION.

The science of medicine is a noble study! It is the study of the mental and corporeal conditions of man in a state of health, the relations which subsist between him and surrounding bodies, and the study of man when debilitated by sickness and disease. There is, most assuredly, no profession which confers so many benefits on society as the medical. It has for its great object the mitigation of corporeal suffering and human misery. Its professors have intrusted to their care, in many instances, the lives of the people. How paramountly important, then, does it behove its members to obtain, by every means in their power, that knowledge which alone can furnish them with instruments to alleviate pain, to cure disease, and wrench, as it were, "life from death." For a medical man to practise his profession efficiently and successfully, and to fulfil the high and important duties which devolve upon him, his days and his nights should be devoted to his professional avocations, either in ministering to the sick, or in elucidating appropriate measures for their relief. Neither difference of *grade*, nor difference of *class*, alters in the slightest the exertions which should be made. Neither titles nor honours can "set an arm or a leg." Persevering industry, combined with talent, can alone elevate the practitioner, and sustain him in this position.

The profession itself should not be a "Tower of Babel," or a body filled with animosities, schism, and petty jealousies. Having all, we trust, one ultimate aim,—that of benefiting our fellow men, why not let unanimity and harmony prevail amongst ourselves? Let the *odium medicorum*, so long proverbial, no more be applicable. Unfortunately, the history of medicine, from the earliest records up to the present period, tells of the rancour, envy, and discord, which has existed amongst its members. Let us, however, indulge in flattering anticipations, that the time is approaching when many of the sources of evil which have disturbed the profession in Britain will be totally eradicated. But, for unity of sentiment and peace to be attained, there must be not only an individual but a collective desire to accomplish this end. It is Christian charity for each conflicting party to make concessions. Without this, conciliation will never accrue. We must emancipate the profession from the trammels of trade, and avoid entering into the arena of the political world, as we would shun the sting of the scorpion! The study of science alone should be *our* occupation: her fair hand should never be polluted by political controversies. There is ample scope in the study of medicine and its collateral sciences for the most gigantic of intellects. Philantrophy is sufficiently exerted by our judiciously applying medicine for the removal of disease. By honestly performing this duty, we not only confer one of the greatest boons on society that *man can bestow*, but we fulfil our lot in the universe.

Nevertheless, as Editors of a Medical Journal, we are compelled to practise this system which we are now decrying,—a system detrimental to the profession and to society. But we are free to confess, we practise it with extreme reluctance. The spirit of the age compels us to the task, but the subject of politics *shall* be

sparingly discussed. Ours is to be a scientific journal. As such, every agent will unquestionaby be employed to accomplish this object. Still, *any topic,* whether "political" or not, that may be allied to the profession, and that can interest its members, shall be published, and shall be canvassed with the most scrupulous care. We shall never swerve from the performance of any of the manifold duties we are called upon to fulfil to our readers, but shall be faithful chroniclers of events, and advocate, with the utmost of our powers, the rights and privileges of the members of the medical profession. We do not, nor ever shall, ally ourselves with any political party,—we are not "political partizans." *To do good* is our motto. To alleviate the afflictions of human nature, to promote the advancement of medical science, to raise its professors into that rank and estimation in society to which they are so highly entitled, are our chief intentions. We profess what is denominated *liberalism* in its most comprehensive signification; viz.—that we ask for the liberty of thinking for ourselves, and of acting as our consciences dictate, at the same time allowing others to do so likewise, without impugning the justness of their motives, or accusing them of dereliction of duty. Man, after all, is liable to err: he is neither immutable nor impregnable; and a well-constituted mind finds not fault with errors of judgment; he infers the motives of men from the actions they perform—sometimes executed correctly, though often erroneously. It is a principle admitted by all metaphysicians, that sordid actions, voluntarily performed, can arise only from a base mind. If the principles we have just cursorily adverted to be the sentiments of the profession, which we trust and doubt not but they are those of the many, why should we be engaged in eternal warfare with each other? As children of one great family, let us live amicably together,—an example to other classes of the community. Testimony, the most ample and gratifying, can be adduced from some of the most illustrious literary authors in modern times, that medical men are the most intelligent, and are endowed with the most liberal sentiments of any class of individuals. Let each man have the free exercise of liberty, in thought, in action, and in expression; let all enjoy that glorious privilege with which Englishmen are endowed. We would not demand of others to act as we do. If all thought alike, universal nature might revert again into chaos. *Motion—change,* the great stimulus and preservative of life, would cease its operations. Each, analyse carefully facts, balance arguments in the scale of reason, and let us not be influenced by the dogmas of a few, or swept away by the torrent of furious and popular enthusiasm.

DR. STOKES'S LECTURES.

We feel great pleasure in being enabled to inform our readers, that we have made such arrangements with Dr. Stokes, and our Dublin Correspondents, that we shall be able to complete his valuable Course of Lectures on the Theory and Practice of Medicine, and also to give all interesting Cases that may occur in the Dublin Hospitals; and we may here further state, that Dr. Stokes's Course of Lectures, which are corrected by himself, will be published *exclusively* in this Journal.—Eds.]

OBSERVATIONS ON THE CAUSE OF THE LOSS OF SUBSTANCE, WHICH CHARACTERISES THE ULCERATIVE PROCESS, OR, ON THE THEORY OF THE PRODUCTION OF ULCERS.

To the Editors of the London Medical and Surgical Journal.

GENTLEMEN,—Prior to the publication of Dr. Wallace's Treatise on the Venereal Disease, no one ventured to call in question the theory of Mr. John Hunter respecting ulceration, which, as is well known, attributes the loss of substance, that characterises the ulcerative process, to the action of the absorbents. Some months after the publication of Dr. Wallace's work, an essay appeared, from the pen of Mr. Key, Surgeon to Guy's Hospital, in the 18th vol. of the Med. Chir. Trans. of London, also calling in question Mr. Hunter's opinions of the cause of ulceration; but this author has in some measure confounded ulceration with an entirely different phenomenon, and has only shifted the difficulty, by giving that work to the veins, which Mr. Hunter attributed to the absorbents.

As it certainly is of very great practical importance to have correct views of the mode in which the loss of substance that characterises the ulcerative process is produced, and as, in my humble judgment, those advanced by Dr. Wallace are founded in nature, it gives me much pleasure to observe, that precisely similar opinions have been advocated by Professor Lisfranc, of Paris, in the last number (the 132nd) of your excellent Journal. But while I receive pleasure from this cause, my *amor patriæ* excites regret that the Professor claims originality, no doubt from being unacquainted with the fact, that these views have been for some time past advanced in this country. Thus, according to the reporter of M. Lisfranc's lectures in your Journal, the Professor observes, that "notwithstanding the careful researches of Mr. W. Bell and M. Richerand on the subject of ulcers, there still remains more than one void to be filled up, in order to complete their description. Numerous questions have not as yet been resolved, whilst others, which are considered as having been elucidated, again require to be examined. We may place under the first head, *the theory of the production of ulcers.*" The reporter then proceeds to give an account of M. Lisfranc's views, in the following words:—"It is therefore admitted, (that is, according to the Hunterian hypothesis,) that when an ulcer is formed, the tegumentary tissues are absorbed, to the profit of the general nutrition, in the same manner, it is said, as the thymus gland and liver in the fœtus lose their volume in the course of time.

"M. Lisfranc rejects this opinion altogether. According to his views of the subject, absorption does not take place, but there exists an inflammation, which is of a gangrenous nature. A slough is formed, which, on being thrown off, leaves a solution of continuity, and thus constitutes an ulcer. The proof is clear and evident. You will find it (said the Professor) in the works of various authors, although they have not seized its application. Do they not state, that, in general, ulceration commences by erysipelas, or else by a pimple which presents at its centre a small phlyctæna? Open this phlyctæna, and a reddish serosity escapes, exposing a slough of the same extent; hence it is unquestionably demonstrated, that cases of this description do not require to be explained by absorption. Moreover, this peculiar species of inflammation, which precedes the commencement of ulceration, is the essential cause of its progress, for as long as the ulcer continues to enlarge, it yields an abundant suppuration, possessing a gangrenous odour, which is readily recognised by rubbing a small quantity of this secretion between the fingers, when it is perceived that it does not entirely consist of liquid pus, but that it is blended with some solid particles, which are, as it were, the remnants of mortified parts. Finally, it is not rare to find, on attentive examination, the remains of a slough adherent to the circumference of an ulcer. In proportion as the inflammation subsides, and the ulcer becomes stationary, or, as cicatrisation advances, the pus diminishes in quantity, neither mortified particles, nor the traces of slough, are any longer found, and the gangrenous odour entirely disappears."

Now, compare these views, and the facts and reasoning by which they are supported, with the views, facts, and reasonings of Dr.

Wallace upon the same subject, which I take partly from his work on Venereal Disease, and partly from my Notes of his Clinical Lectures.

The process of ulceration, as well as the process of mortification, seem to consist of two distinct though connected actions:—one, by which the substance about to undergo ulceration, or to be removed by the process of mortification, is converted into an apparently new texture; and the other, a process by which this texture, when so altered, is afterwards separated from its connection with the living structure. In ulceration, the removal of the altered texture is accomplished by a further change of this texture into a liquid; while, in the process of sloughing, the slough or altered texture is thrown off in a more or less solid mass. In fact, the preparatory stage, or the stage of conversion of the texture which is to be removed into a new kind of substance, is essentially the same in the process of sloughing as in the process of ulceration. It is only in the mode in which the altered structure is thrown off, and in the relative quantity of this altered structure, that any difference seems to exist between these processes. When the altered structure is formed in comparatively large masses, and is separated in thick and visible portions, the process is named *sloughing*, or *mortification*, and the portion thrown off is termed *a slough;* but, on the other hand, if the portion which has been changed in its structure, preparatory to its separation from the body, forms only a very thin stratum, often almost imperceptible, on the diseased surface, and if it be liquefied, as it were, as fast as the change of texture occurs, the whole process is denominated *ulceration*, the surface from which the substance is separated is named *an ulcer*, and the separated substance is mixed in a more or less fluid form with those exhalations or secretions from the orifices of opened vessels, which are called *sanies*, *sordes*, *pus*, &c., &c.

It may probably be said, that the stratum of morbid structure, which it has been affirmed always covers the surface of ulcers, is not to be observed. To this it is replied, that, with the assistance of a magnifying glass of moderate powers, we may always detect, upon an ulcerated surface, a stratum of matter more or less solid, and sometimes semi-transparent, formed by the original texture in process to liquefaction, and easily distinguished from the lymph which covers the surface of ulcers after the process of ulceration has ceased, and that of reparation has commenced. It may also be said that absorption from the surface of ulcers, and consequent impregnation of the system, is notorious. Thus, salivation from mercurial dressings to sores very frequently occurs; but will it not be found, that in all such cases the process of ulceration has actually ceased on the whole or on part of the surface of the ulcer? and that the surface from which the absorption has taken place is a granulating, and not an ulcerating, surface?

The frequency with which the processes of ulceration and sloughing are united, the quick and reciprocal succession or alternation of these processes, and also the occasional occurrence of certain states which bear as much resemblance to sloughing as to ulceration, not only demonstrate clearly and decidedly this close relation of ulceration and sloughing, but also afford examples of surfaces covered by strata of sloughy substance of every degree of thickness, and, consequently, of the gradual transition from the state of ulceration to the state of sloughing.

The intimate relations of the processes of ulceration and sloughing, are very often presented by parts upon which the venereal poison has acted. In fact, it would seem to be a peculiar property of this poison, like some other poisons, to produce a state vacillating between slough and ulcer. Thus, we shall very often find that venereal ulcers, if examined with accuracy, present exteriorly a red margin, and on the inner side of this margin a white line; the red margin denotes the inflammation, or phlogosis, which precedes ulceration, and the white line on the inner side of this margin is the texture which had been red, but which is now white, having been converted into an apparently new tissue, slough, before liquefaction, and consequent separation.

The slough formed by the venereal poison has been frequently observed; but as the intimate relation of that series of actions, which takes place respectively in ulceration and sloughing, has been, in some measure, overlooked, an erroneous opinion has hitherto been formed respecting the slough of venereal

sores, some considering it to be a purulent discharge adhering to the surface; while others, without inquiring into its origin or nature, are content to denominate it a "*lardaceous*" matter; whereas this matter is, in truth, the organic texture in progress to its separation from the part, which separation sometimes takes place in visible portions, by sloughing, and sometimes insensibly by ulceration; or even one portion of the same sore may throw off the diseased matter by ulceration, and another portion by sloughing.

It would appear from a close observation of all the phenomena of the processes of ulceration and mortification that the conversion of the sloughy matter into a liquid, which forms the peculiar character of the former as compared with the latter, is, in some measure, a vital process, and, therefore, whenever the process of destruction extends very rapidly, there is not time, before the part be entirely deprived of life, for the completion of the process of liquefaction. Under these circumstances sloughing necessarily takes the place of ulceration; for the process of softening, or ulceration, cannot occur, unless where the sloughing matter is in contact with parts possessing full powers of life, or where, as we may suppose, its vital action still exists in sufficient force to produce or support this process. An analogous, though an inverse, phenomenon to the process of softening is sometimes exhibited by the blood. The coagulation of this fluid is a vital change, which generally occurs previous to death, and for the perfection of which more or less vitality is required; hence it is that, when death takes place very suddenly, as from lightning, &c., there is not time for this process to occur, and the blood remains permanently liquid. In the same way, in the process of sloughing or mortification, there is not time for the liquefaction of the slough or altered texture before its perfect death has taken place, and, therefore, it must be thrown off in a state more or less solid, by a process, which, as well as the process of ulceration, has been erroneously attributed to the action of the absorbents, but which is simply a vital liquefaction of the sloughy matter at its line of junction with the living parts.

Were Mr. Hunter's opinions of the process of ulceration correct, as, in his judgment, ulceration implies absorption, contamination of the system should always follow ulceration; but, as we know that this is not the case, we might almost infer, from this circumstance alone, that ulceration is not caused by absorption. Mr. Hunter was himself well acquainted with the fact, that contamination of the system did not necessarily succeed a chancre, and, therefore, he admitted that a chancre was a local sore; but, in making this admission, he evidently contradicted his own hypothesis respecting ulceration; for, if this process be an act of the absorbents, it is clear, as has been just said, that from the moment at which ulceration first commences, absorption and, consequently, contamination of the body also commence; unless we admit that the venereal poison may be received into the mass of circulating fluids without necessarily causing constitutional disease—an admission, however, which we are not warranted in making.

On the other hand, according to the opinion here entertained of the process of ulceration, it is evident that a chancre may exist without absorption, and, therefore, without contamination of the system. It might even be further affirmed that it is extremely probable that, so long as the process of ulceration continues, no absorption can take place from the ulcerating surface, and, consequently, that contamination will not occur until after this process has terminated on either a portion or the entire of the diseased surface. We know that the state of inflammation precedes and accompanies ulceration, and that the action of the absorbents of inflamed tissues is either suspended altogether, or greatly diminished. To this we may add, that it is extremely improbable that the absorbents of a tissue, either in the state, or passing into the state, of ulceration or sloughing are in a fit condition for performing the function of absorption. It must, at least, be admitted to be very unlikely that any substance, applied to the surface of a sore, can be absorbed during ulceration, if we reflect that all ulcerating surfaces are formed of a tissue, which is *in transitu* from the state of a living texture to that of an inorganic fluid; and it is quite possible that, although this substance may form a stratum almost inconceivably thin, it may still be sufficient to obstruct absorption.

The views above expressed of the intimate nature of sloughing and ulceration are not

devoid of practical utility. They lead to the following important conclusions :—

If by any means the poisonous quality of an ulcer, produced by the direct application of the venereal virus, can be destroyed before the process of ulceration has ceased in any point of the ulcer, the contamination of the system will be prevented.

If, from the violence of inflammation, a process of sloughing commences in a chancre, before the process of ulceration has ceased upon any portion of its surface; and if this process involves the structure of the part beyond the point of contamination, it may form not only a natural cure of the local disease, but may also prevent contamination of the system. Gangrenous or sloughing chancres afford common examples of the truth of this assertion; and it should be observed in support of this opinion, that it is admitted that, when the gangrenous or sloughing process attacks venereal sores in their earlier stages, it much more frequently prevents contamination of the system, than when this process does not commence until some time after the chancre has been in existence.

Should a bubo occur in consequence of a chancre, before the ulcerating process of that chancre has ceased, it is more likely that such a bubo has been produced by irritation than by the absorption of the virus. Indeed this fact is tacitly admitted by those who have most experience in venereal complaints; for it is allowed that buboes are most apt to occur after a lapse of some time from the formation of a chancre; and it is also admitted that the longer a chancre has continued before a bubo has been produced, the more likely is such a bubo to be the forerunner of constitutional symptoms. In fact, it is more than probable that a bubo cannot occur from absorption until the process of ulceration has ceased in a greater or lesser portion of a chancre; and if any tumefaction of the neighbouring glands should be observed prior to this period, we may perhaps fairly conclude that it has been produced by sympathetic irritation. At the same time, the great difficulty which will be always found in distinguishing between a surface upon which the process of ulceration has not ceased on any possible point, and that upon which this process may have partially ceased, will always prevent a prudent practitioner from acting upon such views with too much security. It is also to be observed that absorption may take place from the surface of a minute abrasion or wound, before ulceration has occurred.

It must now appear evident that there is no difference between Dr. Wallace and M. Lisfranc, except in the greater precision and the more correct reasoning of the former, as well as in the more extensive practical application made by him of the important law in pathology, which he has indubitably the merit of having first advanced.

Your insertion of this communication in your widely circulated Journal, will have the effect, not only of calling universal attention to the important subject to which it relates, but also of giving to the rightful owner whatever merit may be due to the originator of the views in question.

I remain, Gentlemen,
Your's, very respectfully,
A Former Pupil of Jervis Street Infirmary.

Dublin, August 13th, 1834.

British Hospital Reports.

ST. THOMAS'S HOSPITAL.

Diseases of the Brain and its Appendages.

(*Continued from page* 831, *Vol. V.*)

Case V.—*Encephalitis Chronica.*—Thomas Dixon, a smith, of good constitution, states, till five years ago he enjoyed perfect health. At that period he was attacked with pain in the head, accompanied with giddiness and a sensation of stupor; since then the symptoms have continued, but at irregular intervals. At the present time his eyes look dull and heavy, pupils slightly dilated, countenance anxious; says, at times he is subject to palpitation. The disease came on suddenly; and about sixteen years ago he received a blow on the back part of the head. Bowels regular; tongue clean; pulse 110, compressible and irregular.

He was admitted on the 13th of June by Dr. Elliotson, who prescribed mercury, bleeding, and a seton to the back of the neck. The mercury was continued till it produced salivation; the blood was buffed and cupped. After ptyalism was produced all the unpleasant symptoms of the head disappeared. He remained in the hospital till the 3rd of July, when he was discharged greatly relieved. He was recommended to continue the seton in his neck.

Case VI.—*Encephalitis.*—John Wright, a cabinet-maker, aged 18, of pallid and meagre appearance, states, that he has been ill two months; was first attacked with heaviness about the eyes; a fortnight afterwards shooting pains in the forehead supervened, and since then he has been troubled with both these symptoms. In the morning the pain comes on as soon as he awakes, and continues till four o'clock P.M., but the sensation of weight always remains stationary. His pupils, at the time of admission, were dilated, and he had a slight anxious appearance; appetite good; bowels confined; pulse 78 and compressible; tongue clean. Dr. Elliotson, under whose care he was taken in, had him at first bled to sixteen ounces, and prescribed three grains of calomel three times a-day; the blood was much buffed and cupped. Subsequent to this, leeches were applied on the back of his neck; and, by the 28th, after being in the hospital twelve days, during which time he had been taking the mercury, his mouth became sore, the pain and heaviness of the head were immediately relieved, and the pupils resumed their natural size. On the 5th Aug., he left the hospital, his mouth had become quite well, and he appeared in tolerable health and spirits.

Case VII.—*Hemiplegia.*—William Kibb, aged 17, a cork-cutter, was admitted Aug. 1st, by Dr. Elliotson, in Williams' Ward. About seven weeks ago he states he had severe shooting pains in his left temple, accompanied with giddiness, which, in the course of a few minutes, became so violent, that he fell down. He remained conscious; but his speech, together with the sensation and motion of the left side, became much impaired. In the course of a few hours he recovered, to a certain degree, his speech, but sensation and motion of the affected side has not since then been perfect. He has been affected by two other attacks since, but of a much slighter character. Hemiplegia at present very slight. Complains of headach, and pains in his limbs of an inflammatory nature; bowels regular; tongue coated with whitish mucus; pulse 80.

This was treated for an inflammatory state of the brain and its meninges, he was bled to ℥ xvj., and took gr. x. of pilul. hydr. twice daily. The blood was slightly buffed, the pain in the head from the bleeding was a little relieved; but the hemiplegia remained in the same state. After taking the mercury five days, his mouth became affected; the pain soon ceased; in his leg sensation and motion were now almost perfect; but the arm of the affected side remained in the same state. The quantity of mercury was now decreased to one-half, and this quantity was continued till the 12th of August. To day he passed a portion of tape-worm, and he states within the last twelvemonth, several times he has observed the same thing. Giddiness worse; sensation and motion more imperfect. Half an ounce of oil of turpentine was now ordered, to be given immediately. After which his bowels became much relaxed; passed fourteen stools, and amongst them were large quantities of tape-worm. The next morning he took some castor oil; in his dejections were observed some ascarides, but no more of the tape-worm. After these evacuations he became weak and low, but passed a good night. The next day, on the 15th, the vertigo and headache had entirely ceased; and sensation and motion in the affected side were nearly restored. In a few days afterwards, more of the turpentine was administered; no more worms were passed; he became perfectly well, with the exception of a slight sensation of numbness in the affected leg, and was discharged on the 19th of the last month.

Case VIII.—*Phrenitis Chronica.*—Samuel Diggle, aged 30, a labourer, of lymphatic temperament, who had always from infancy enjoyed good health, in March last was seized with pain in the head, with a dull and heavy sensation. This, however, in the course of a few days disappeared, and about two weeks since, while at work, the giddiness returned so violently that he nearly lost his senses. His mouth after this attack, he observed, was drawn to the healthy side, his speech became thick, and the right side of his face, his body, and thigh felt numb; in a few days, however, he was able to again resume his employment. Since then he has had several attacks, and in one he completely lost his senses. At the present time, he complains of occasional giddiness, with a dull heavy pain, and a sensation of fulness in the head. Bowels costive; tongue clean; pulse rather quick and full. Bleeding and mercurializing were in this case prescribed; forty-six ounces of blood were extracted from the arm, without producing fainting; the blood was slightly buffed. Giddiness has not returned since the immense loss of blood; his bowels have become relaxed, in consequence of which the blue pill was discontinued, and five grains of the hydrargyrum cum cretâ given twice a day in its place. By the 12th it became necessary to bleed him again to twelve ounces; the blood was still buffed; his mouth also by this time became tender, and all the symptoms were immediately relieved. Smaller quantities of mercury were daily administered, in order simply to keep up its action. The giddiness every now and then returned, but the paroxysms were very slight; diarrhœa supervened, for which inf. of catechu was prescribed. These symptoms subsided, and the man, though at the present time in the hospital, has been well for some days, and remains in only to see if a relapse will take place.

WESTMINSTER HOSPITAL.

Lithontripsy—Mr. L'Estrange's and Mr. Weiss's New Instruments.

On Saturday, the 30th of August, Mr. Guthrie made some remarks on the instruments recently invented by Mr. L'Estrange and Mr. Weiss, previous to which he alluded to the three branch instrument, which he considered as decidedly objectionable. He stated that he was the first to use the one with three branches in this country, on a patient at the York Hospital, and he had the misfortune to catch the mucous membrane of the bladder with it, and to bring away a small portion. The man was afterwards cut, and did very well. The inventions of L'Estrange and Weiss were exhibited and explained. They are constructed on a principle similar to that of the *percuteur*, with the exception that pressure is exerted by a screw instead of the hammer. That of Mr. L'Estrange consists of a moveable upper blade sliding upon the lower one, which is grooved, and which are introduced into the bladder as one; but should it become necessary, even when in the urethra or bladder, they can be detached and withdrawn separately; between the two lies a stilet, which can be pushed forwards to clear away the detritus which may collect between the teeth of the instrument, and prevent their closing accurately. The distance to which the blades are separated by the calculus when caught, is marked by a blue scale, which gives the diameter of the stone, and corresponds with a similar scale on the cradle or box which receives the handle of the instrument, and in which the screw plays. By turning the screw, it advances the upper moveable blade upon the lower one, and thus the calculus is crushed between them. When the instrument is passed into the bladder, the cradle and screw are not affixed, but are held in the hand of an assistant; the calculus being seized, and the diameter ascertained by the blue scale, the assistant advances or draws back the screw of the cradle to the corresponding mark, and then affixes it to the instrument; the screw is now applied to the upper branch, and a few turns crush the calculus. The calculo-fractor is a very simple instrument, but one of great power.

Mr. Weiss's invention is of a similar nature, the instrument consisting of an upper piece moving on the lower one, but, instead of the pressure being exerted by a screw placed at the end of the instrument in a cradle, it is applied through the medium of a screw with a double lever handle, beyond which projects a frame work, in which a moveable slide plays, and by which means the instrument can be rendered a *percuteur*, that is, the hammer can be employed, as well as the screw, at the option of the operator.

A young man was introduced into the theatre afterwards, and Mr. White proceeded to operate. He was placed on the *lit rectangle*, and, a catheter having been passed, the bladder was injected. Mr. White then tried to pass L'Estrange's calculo-fractor, but it was found to be too large for the orifice of the urethra, and Mr. Weiss's was passed instead. It was soon, however, discovered that it was impossible to seize the stone, which lay directly in front of the instrument. The difficulty was attributed to the contracted condition of the bladder, which would scarcely hold four ounces of water. The operation was therefore given up for the present, and he was directed to have the bladder injected every day, gradually increasing the quantity thrown in.

The patient is a young man, 24 years of age, tall and thin; he has laboured under symptoms of stone for the last four years.

Very little irritation followed this attempt, but he describes it as being "almost too sharp."

Neuralgic Mammæ.

Emily Jones, ætat 18, admitted Nov. 17th, 1833, under Mr. Lynn, into Anne's Ward, a stout girl, of the middle size, and sanguineous temperament. The disorder under which she labours affects the right mamma, which is enlarged to double its usual size, the whole surface being so irritable and painful, that she cannot bear the slightest touch; she suffers from pain in the chest and loins; also in the right arm-pit and side, extending down the right arm as far as the elbow; has cough, but no expectoration. The pain is sufficiently violent to prevent sleeping; pulse full, soft, and frequent; face flushed.

This enlarged and irritable condition of the breast has continued about a year and half, and she cannot assign any reasonable cause for it; has not received any blow or other injury to it that she is aware of. The swelling appeared first gradually increasing in size, and a month elapsed ere it became painful; she then placed herself under the care of a medical man for two months, by whom she was bled twice, and had medicines. She was afterwards three months in St. Thomas's Hospital, under Dr. Elliotson, where she was bled and cupped frequently, and had cold lotions applied; the carbonas ferri was also administered, but no advantage derived from its use. After that she was a patient at Guy's for six months, under Mr. Morgan, where pressure was employed, but venesection was not practised. She was twice in Guy's Hospital, the last time under Mr. Key; she has also attended there as an out-patient under Mr. Callaway. The last time she was in that hospital, belladonna plasters were applied. She always experienced relief from bleeding, both as regards the breathing, and the condition of her breast. While under Mr. Callaway, opiates were given, and, lastly, the ferri ioduretum, with the infusion of cascarilla.

The left breast is very large, but not painful;

it measures twelve and a half inches in circumference, the right fifteen and a quarter. She says it was much larger six months ago, and it has been decreasing in size considerably since. The catamenia appeared first at thirteen years of age; she has never been regular; their appearance is always preceded, accompanied, and followed by pain, and an interval of two or three months generally occurs between each secretion; the quantity of fluid discharged is very scanty, and of a black colour; she has never passed clots of blood, nor shreds of membrane. At the time when she should be regular, she suffers from pain in the occiput. The bowels are generally open.

On the 28th, twelve ounces of blood were drawn from the arm with relief. Mr. Guthrie saw her, and recommended ten drops of the tinct. lyttæ, and ten of the oleum terebinthinæ, twice a-day; he was also desirous that a consultation should be held on the case on the 30th. Dr. Roe saw her soon afterwards, and spoke in favour of venesection or the application of leeches, with iodine internally and externally. He recommends the blood-letting to remove the increased vascularity, on which, he says, the increase of volume depends, and the iodine to excite the absorbents to action.

30th. Mr. Lynn adopts Mr. Guthrie's suggestion, and adds, that he recommended marriage to her a year ago. She is in less pain, and thinks herself better.

℞. Tinct. lyttæ, gtt. x.; Ol. terebinth. ʒss.; Aquæ et mucil. ut fiat haustus;—ter in die sumend.

Dec. 7th. The breast appears to be much about the same size, but far less painful; she complains of great pain in the loins, and says she is labouring under leucorrhœa. The turpentine has not caused either sickness or scalding.

13th. The breast appears to be rather smaller, and is evidently less irritable. She has been suffering from strangury and retention of urine, which required the use of a catheter, and an opiate enema.

14th. Mr. Guthrie has ordered her the following ointment, from which she derives relief.

℞. Acet. morph. gr. ij.; Adipis, ʒij.;—Fiat ung. ʒj. nocte et mane utend.

15th. The breast is more painful and irritable. She says the catamenia would be flowing about this time were she regular. The scalding is much lessened.

21st. Uses the hip-bath at night, and is taking Griffiths's mixture and the galbanum pills. The menses appeared last week, but only for an hour.

24th. Is much improved; the breast has nearly lost its irritability, and both are much reduced in size; they are now only nine inches in extent. She is far more cheerful than when she came in, and indulges hopes of a cure being effected.

Jan. 14th, 1834. Has become much worse within the last few days, and her spirits are correspondingly depressed: the breast is now nearly as large and as irritable as when she was admitted. She has been bled from the arm with relief; is to resume the lytta and terebinthinate, and to have half a grain of the extract of belladonna twice a day; an acetate of morphia lotion to the breast. (Near the time for the menstrual secretion.)

25th. Is much easier; and the breast again diminishing in size.

February. Has met with an accident and broken a rib, for which she has been bled, and purged; to have a bandage round the chest; omit the lytta.

18th. Ordered to resume her usual medicines, but is very unwilling, on account of the pain and irritation they cause, to take them, until they produce that effect.

March 1st. Is doing well; the breast is easy, and becoming smaller; but she is not regular yet.

Is very anxious to become an out patient, which was agreed to; did not attend afterwards.

OXY-HYDROGEN GAS LIGHT.

An interesting experiment was recently made in Paris, with a view to apply the oxy-hydrogen gas light upon quick lime, as a substitute for that now used at the light houses in France. This experiment was made before the light-house committee, and was on the whole successful. The object of the experiment was to ascertain if, by this process, the light could be maintained for twelve hours with uniform steadiness. It was produced in the atelier des Phares, at ten o'clock A. M., and continued to burn the whole of the day. It is stated that this light, when refracted by the lenses, is equal to 20,000 Argand lamps, and would be visible at the distance of forty-five miles. It is, moreover, calculated that its cost will not be more than about sixpence per hour, and that its intensity is susceptible of increase at a trifling increase of expense. The only inconvenience likely to arise will be from the small bulk of the flame, as compared with the large blaze of the concentric lamp; but it is supposed that this inconvenience may be easily obviated. —*Athenæum.*

ROYAL COLLEGE OF SURGEONS.

Names of Candidates who received Diplomas during the Month of August, 1834.

Philip Elliot	Salisbury.
J. Elliot Hewitt	Barbadoes.
John Coley	Bridgenorth.
D. Augustus Lowe	Plymouth.
J. Lewis Barrallier	Leigh, Lancashire.
W. G. Thirselton	Great Russel-street, Bloomsbury.

R. Steele Perkins	Burton-upon-Trent.
J. Hogarth Hedly	Newcastle-upon-Tyne.
T. Reynolds Jackson	Charles-street, St. James's-square.
J. Cusson Turner	London.
J. Caparn Smith	Northampton.
Richard Aulsebrook	Rolleston, Notts.
Samuel Holmden	Amphlett, Birmg.
Courtland S. M. Shaw	Newcastle, Emblyn.
G. Macartney Leese	Baker-street.
John Wile	Aberdeen.
William Tod	Hampstead-road.
Sylvester Eastes	Hythe, Kent.
George Henny	Wortham.
Richard Allen	Liecester.
W. Izard Phillips	
Lewis Redwood	Cowbridge, Glamorganshire.
J. Fountain Elwin	Bath.
Francis Moore	Gt. Hadham, Herts.
W. Henry Gooch	Brighton.
Edward Williams	Denbigh.
Will. Harris	Preston.
H. Calvert Medcalf	North Cave, Yorksh.
James Jephson	Leamington.

APOTHECARIES' HALL.

NAMES of those gentlemen to whom the Court of Examiners granted Certificates of Qualification, Thursday, August 28th.

Daniel Dorning	Swinton, Manchester.
John Young	Leicester.
Henry Trant	Leeds.

NOTICES OF NEW WORKS.

The Dublin Practice of Midwifery. By HENRY MAUNSELL, M.D., &c., &c. 18mo. pp. 244.

Essay on Poisons; embracing their Symptoms, Treatment, Tests, and Morbid Appearances; to which is added an Appendix, or Means for treating Cases of suspended Animation. Sixth Edition. Illustrated by twenty-one coloured plates. By THOMAS CASTLE, M.D., &c. 24mo. pp. 132.

Dr. Davis's Fasciculus, XXXV., on the Principles and Practice of Obstetric Medicine, &c.

The present part is equal to its predecessors. The work, when finished, will be unparalleled for utility in British Midwifery. It far surpasses every other.

A New Synopsis of Nosology, founded on the Principles of Pathological Anatomy, and of the Natural Affinities of Diseases. By G. HUME WEATHERHEAD, M.D., &c. 18mo. pp. 90.

CORRESPONDENTS.

Dr. S.—The case in which Dupuytren operated for the cure of artificial anus shall be inserted next week. All interesting cases, whether from hospitals or dispensary practice, will be inserted.

Our Correspondent from Paris.—The communications have been received. We shall be at all times happy to insert all communications from our intelligent correspondent.

S. T. of Liverpool.—His letter shall be attended to.

S. B.—We have received so many communications on Cholera, that only those of real value can be inserted.

G. H.—We have read the article alluded to by our correspondent in the papers respecting medical witnesses, and shall dilate upon it next week.

L. H.—The case of epilepsy cannot be inserted in this Journal.

METEOROLOGICAL JOURNAL.

MONTH. Aug., 1834.	Moon.	Thermom.			Barometer.		De Luc's Hygrometer.		Winds.		Atmospheric Variations.		
28		60	66	58	29·64	29·58	67	67	S.S.W.	S.	Fine	Fine	Rain
29		63	67	60	29·44	29·37	73	74	S.S.E.	S.	——	——	Cloudy
30		65	65	55	29·40	29·42	77	70	S.S.E.	S.	Cloudy	——	Fine
Sept.													
1		60	67	57	29·50	29·56	70	73	S.	S.W.	Fine	Cloudy	——
2		63	67	56	29.62	29·65	75	75	S.	S.W.	Cloudy	Rain	Cloudy
3	○	62	65	56	29·74	29·81	75	74	W.S.W.	S.W.	Fine	Fine	Fine
4		64	67	53	29·84	29·79	72	69	S.S.W.	S.W.	Cloudy	Cloudy	——

50, *High Holborn.* WILLIAM HARRIS and Co.

ALL Communications and Books for Review to be forwarded (free of expense) to the Publisher, 356, Strand, near King's College.

THE

London Medical and Surgical Journal.

No. 137. SATURDAY, SEPTEMBER 13, 1834. Vol. VI.

LECTURES ON THE THEORY AND PRACTICE OF MEDICINE,

BY WILLIAM STOKES, M.D.,

Delivered at the Medical School, Park Street, Dublin.—Session 1833–34.

LECTURE XXXII.

Paralysis from Arterial Disease—Rostan's Cases—Effect of Magnetism in Disease—Result of Trials at the Meath Hospital—Paraplegia—Occurrence without Disease of the Cord or Vertebræ—Researches of Mr. Stanley—Ammoniacal Urine—Caries of the Vertebræ.

Gentlemen,—At my last lecture I spoke of that form of paralysis which depends on arterial obstruction, and mentioned, as one of the principal diagnostics, a remarkable coldness of the diseased limb. I quoted for you a passage from Dr. Abercrombie's work, in which he suggests that it is probable that the actual condition of paralytic limbs, in the usual acceptation, so far as temperature is concerned, depends upon their having lost that power which animal bodies possess of preserving a medium temperature; so that their temperature becomes elevated or lowered according to that of the surrounding matter. The general rule in cases of this description is, that the temperature of a paralysed member is a little lower (say two or three degrees) than the rest of the body; but when we find a limb reduced to the temperature of 58°, as in the case I mentioned, it is quite a different thing, and, under such circumstances, the great probability is, that the paralysis is connected with arterial obstruction.

You will see in Rostan's work on the Softening of the Brain the reports of two cases of this disease, occurring in patients of extremely advanced age. In one, there was complete paralysis of the right arm, which was cold and livid. The fingers were threatened with gangrene, and no pulsation could be felt in the radial artery. By stimulating frictions a certain degree of warmth and motion was restored, and it was even thought that pulsation could be perceived. By degrees the power of the left arm and of the lower extremities began to fail, with diminution of the force of the pulsation. On dissection, extensive disease of the arteries was found; the right brachial, at the insertion of the deltoid, was obliterated by a mass of fibrin, below which the vessel was contracted and closed; the left brachial artery was also narrowed, but without any clot; and this condition was further met with in the crural vessels. The cerebral arteries and the aorta were diseased. In the second case, the patient, aged 80, was attacked with violent pains in the left leg, which became cold and bluish. There was no lesion of intelligence, and the corresponding arm was unaffected. In fifteen days, the pains having augmented, a certain degree of paralysis supervened, which, however, was never complete. On dissection (the disease having lasted a month), the crural artery was found extensively obliterated by a fibrinous clot. Here you observe, gentlemen, that, notwithstanding the great age of both patients, the disease was not *ossification*, but, in all probability, *arteritis*.

At our last meeting I forgot to mention the particulars of a case bearing on this part of the subject, and which goes to prove that even complete coldness of the affected limb is not, in itself, sufficient to establish the diagnosis of paralysis from arterial obstruction. I have had lately under my care a gentleman who has been for the last four or five years labouring under paralysis of the lower extremities, unaccompanied by any symptoms indicating disease of the brain. His intellect remains not only unimpaired, but in a state of high activity; and, what is equally singular, he has had none of the usual symptoms of disease of the vertebræ or spinal cord. His limbs, however, are quite powerless, and are of an *icy coldness*, and yet you will hardly believe me when I tell you that I have repeatedly felt the femoral, popliteal, and even the anterior tibial arteries pulsating distinctly! This is a singular fact, but I have verified it by a number of observations. You will perceive, then, that in taking a remarkably diminished tempera-

ture as a diagnostic of paralysis from arterial obstruction, we must admit that as a sign it is only valuable *when combined with absence of arterial pulsation.* In this case, the fact of such extreme coldness of the lower extremities at the same time that their circulation continues with undiminished activity, becomes of great importance, as tending to prove that the temperature of the body depends more upon the state of innervation than on arterial action. There are, indeed, many facts which go to prove that animal heat is more closely connected with the nervous system than with the circulating.

I spoke of the employment of electricity and galvanism in the local treatment of paralysis. While on this subject I shall take an opportunity of briefly drawing your attention to the use of magnetism in certain cases of nervous disease. Here let me be understood, I am not going to lecture on *animal magnetism;* it is at present a theme unsuited for the practical physician; no one more firmly disbelieves, no one more thoroughly despises, than I do, the countless absurdities which have emanated from the imaginative disciples of animal magnetism. But as in almost every human hypothesis there is a fraction of truth, so in the doctrines of animal magnetism there is, perhaps, something which may not be entirely visionary; and it is possible that there may be some modification of the nervous influence communicable from one person to another;—this is one of the doctrines of animal magnetism. Another leading doctrine is, that organs, which are adapted by nature for the discharge of some peculiar function, appear in their magnetised state to take on a new function. Now, without saying that we are to believe in this, or in the extraordinary romances which are given in illustration of it, still it is right to admit the possibility of its occurrence to a certain degree, because we frequently observe in pathology many instances of organs taking on functions, not merely new but even totally repugnant to our ideas of their structural arrangements. We may, then, I think, without going too far, admit the possibility of a communication of some modification of the nervous influence from one person to another, and that organs under this influence may take on new functions; but, in the present state of this subject, this is as far as we can go.

But we have to deal at present with a more tangible and important subject, namely, the action of magnetism, in its proper acceptation, on the human body. You are aware that the term *animal magnetism* was first applied to the results of certain effects on the human system, which were supposed to be brought about by the aid of metallic contact; and you are all acquainted with the history of the metallic tractors. The term *magnetism,* however, is totally inapplicable to the communication of nervous influence from one individual to another; nor have we any grounds for connecting such phenomena with magnetism in its proper acceptation.

That a magnet should act on the human body is neither extraordinary nor incredible. You know that electricity, and its modification galvanism, have a powerful influence on the system; and modern researches have shown, that there is a close connection, if not an absolute identity, between electricity and magnetism. Now, on this subject of magnetism the researches of some eminent men have been, latterly, employed, and the results of their labours have been received by some with an undistinguishing credulity, and by others with unphilosophical scepticism. One of the principal things which has prevented medical men from entering on this subject is, that many persons have confounded the results of magnetic action on the human body with the absurdities of animal magnetism and metallic tractors. There is, however, I need not repeat to you, an essential difference between them. In the Meath Hospital I have lately made a number of experiments, with a view to ascertain the effects of a powerful magnet on the human body. The magnet which I used was one of considerable power, being, in its highest state of action, capable of supporting a weight of more than twenty pounds. Now, in almost every instance where this instrument was used we found that, when brought near to sensible surfaces, phenomena were produced which were very similar indeed to those of electricity. These phenomena also appeared in so many cases, and with such a remarkable constancy, that they could not be accounted for by any supposition of accident. We have applied it in cases of rheumatism, sometimes to a healthy part of the body, sometimes to the part affected. In one of these cases the application of the magnet was followed by a very rapid subsidence of the morbid symptoms, and the patient got well in a few days. Here let me remark, that there is no one more opposed than I am to the publication of the result of a single case as a proof of the success of any particular remedy; and, in putting forward this case, I do not wish it to be received as an instance of a decided cure of rheumatism by magnetism. The only reason why I quote it is, because in other cases of rheumatism we had distinct evidence of the influence of the magnet to a greater or less extent. The patient, a stout man, of good constitution and in the prime of life, was brought into the hospital for an attack of rheumatism in the back and left shoulder, which had come on after exposure to wet. The first seizure was three days before admission. When brought in he had severe pain in the back and shoulder, increased on pressure; he could neither elevate his arm to his head nor could he bend the head towards the shoulder without great difficulty and suffering. The value of this case consists chiefly in this, that except using the magnet there

was no other remedy employed; if any other medicinal agency had been used it would have been difficult to attribute the merit of the cure to magnetism. I applied in this case the large magnet to the shoulder within a short distance from the skin. In about half a minute the patient remarked that he felt a kind of pricking sensation immediately under the magnet; this was succeeded by a feeling of heat in the part which became increased by continuing the application, while at the same time the pain was sensibly relieved. The sensation of warmth continued in the shoulder for about ten minutes after the magnet had been removed, and the patient declared that he received great benefit from the application. On the following day the magnet was applied again with precisely the same results; the same thing was done on the third day, when the pain was very much reduced and the arm became more moveable. On the fourth day the mobility of the limb was increased, and he could bend his head in the direction of the shoulder with very little inconvenience. On the eighth day the power of motion was restored, the pain gone, and the patient left the hospital quite well. I have heard nothing of him since; but if he had not experienced permanent relief it is very probable he would have returned again, for he seemed quite pleased with his treatment. If this was the only case in which the magnet had been employed it would prove nothing either for or against its use. It might be said, that the cure in this instance was the result of keeping the patient in a warm bed, and that any good supposed to be effected by the magnet might be attributed to the influence of imagination. But to this it may be answered, that the sensations observed by this patient were *exactly the same as in others*, each having noticed the peculiar pricking sensation in the part to which the magnet was applied and the subsequent feeling of warmth. Again, it is to be remarked, that although the symptoms in this case were severe, the cure was extremely rapid; and when you recollect the obstinacy of most affections of this kind, you must allow that a week was a very short space of time for its accomplishment.

The following is another equally interesting case. A women was admitted into the Meath Hospital, labouring under paralysis of the right side of three weeks' standing. The history of her case was that she had fallen into a state of mental despondency, after the death of her husband, who was her only support; she then got symptoms of derangement of the stomach and hypochondriasis, followed by an attack of paralysis, which deprived her of the power of using one side. On examination, we found that, as far as motion was concerned, the paralysis was not complete, but that there was a total loss of sensation in the side affected. I was curious to observe what the effect of the magnet would be, and accordingly applied it to the spine, moving it upwards and downwards along the cervical and dorsal regions, at about half an inch from the surface. After it had been applied for a few seconds, she remarked that she felt a sensation "of wind" passing over the left shoulder but not over the right. Observe it was on the right side of the body that the paralysis existed in this case, and you will also recollect that it was chiefly a paralysis of sensation. Now, it is quite contrary to chances that she should have described it in this way, if she had not really felt it in this situation. The action of the magnet was naturally felt on the left, which was the sensible side, for, on applying it to the opposite or paralysed side, she said she no longer felt the sensation of "the wind." During the operation she saw the instrument, and if disposed to draw upon her imagination for a description of her sensations, she might say that she felt the aura on the paralysed side; but this was not the case, for she stated that it was no longer perceptible when the magnet was moved from the sound to the paralysed side. In this case, I must tell you, that magnetism was not the sole remedial agent employed, for she had been also leeched and blistered. She was admitted on the 12th of August, and on the 17th of the same month the power of motion in the upper extremity was so much increased, that she could grasp objects with force, and place her hand on the top of her head with facility. On this day, after having applied the magnet, she immediately exclaimed that she felt the wind for the first time over the right shoulder, and, on examination, it was found that sensation to a certain degree had returned to the right side, and here you will perceive that the first manifestation of the return of sensibility was denoted by her feeling the magnetic influence in the paralysed side.

I shall not take up your time any longer by detailing cases; it will be sufficient to state that it was used in many other instances of a similar kind, and in all with the same result. Each patient described the same sensation with very little variety; in some, it consisted in a feeling of pricking or tingling; in others, of an aura passing over the part. Some stated that they felt a sensation of warmth in the part some time after the magnet had been applied, and some a kind of suction, as if the skin was drawn towards the magnet. When it was applied over a very sensible or a blistered surface, the patients felt the pricking sensation to amount to pain, and the feeling of warmth and suction was proportionally increased. I have also to observe, that it was employed on a set of patients, the majority of whom were totally ignorant of its nature and effects, and yet it is very remarkable that there was an almost universal accordance in their descriptions of the sensation produced. It has been stated by some writers

on the subject, that the sensations differ according to the pole of the magnet employed. This statement does not accord with our experience, for in every one of our cases the sensation was the same, whether we made use of one pole or the other. As far as our experience goes, it is, I think, fair to conclude that a very perceptible influence may be produced on the human body by the application of the magnet; it is another matter to ascertain how far it may be rendered available as a therapeutic agent. The cases in which I think it might be employed with advantage, are cases of nervous and spasmodic affections and muscular rheumatism. That the sensations described by our patients had an actual existence, and were not the result of imagination, I am firmly convinced.

Before I leave the subject of paralysis, I wish to draw your attention to one more form of the disease by no means uncommon; I allude to that in which *both* the lower extremities are exclusively engaged. This is a disease or symptom which may arise from a great number of causes, and be observed under a variety of circumstances. Generally speaking, however, it will, in almost every instance, be found to depend on some cause which engages the spinal marrow, either primarily or secondarily. I believe that this paraplegia, as the result of disease of the brain, is never met with except in combination with paralysis of the upper extremities. General paralysis may be produced by cerebral disease, and in describing the various forms of paralysis which depend on disease of the brain, this form has been particularly noticed, but when paralysis of the lower extremities *alone* occurs, it is generally the result of some lesion of the spinal marrow, either organic or functional, below the situation in which the brachial nerves are given off. Among the causes by which this paraplegia is produced, the following are the principal: inflammations of the membranous coverings of the spinal cord with effusion of lymph or serum; spinal apoplexy, ramollissement from inflammation of its substance; pressure on the cord, by solid tumours from a variety of causes; the bursting of abscesses or aneurismal swellings into the vertebral canal as occurs in some cases of aneurism of the abdominal aorta. Thus during the progress of a case of this description it has been observed that the patient suddenly became paraplegic, and, on examination after death, a quantity of blood which escaped from the aneurismal tumour has been found compressing the spinal marrow. Lastly, recent investigations have established the fact that we may have paralysis of the lower extremities, and yet on dissection *we cannot detect any traces of disease in the bones of the vertebral canal, or in the membranes or substance of the spinal cord.* Hence, gentlemen, you see how cautious you should be in making the diagnosis, so common among surgeons, of caries of the vertebræ, in cases of paralysis of the lower extremities. The truth is, that in the present state of medicine on this subject, we labour under very great difficulties; the diagnosis of these affections is exceedingly obscure; it is a subject still open to investigation, and I need not remark that it is one of paramount importance.

Paraplegia is one of the most miserable diseases to which the human body is liable. It is almost always obstinate and unmanageable, and in the majority of cases incurable. How far the fatality of the disease depends upon the want of an accurate diagnosis, and a correct plan of treatment, must be determined by future observations, but it is a fact that a vast proportion of paraplegic patients die, and under the most melancholy circumstances. In many cases the formation of gangrenous sores on the back and loins is a common occurrence. For this there are two reasons; first, the vessels of those parts exposed to pressure from position fall into that state which Andral terms *mechanical hyperæmia*, the result of which is that they are unable to unload themselves, a stasis of blood follows, and this leads to mortification of the part; secondly there is a lesion of innervation. Hence it is that the great majority of patients of this kind die with gangrenous sores on the back and loins. They have also most constantly paralysis of the bladder or its sphincter or both, producing retention of urine, or retention with incontinence, or stillicidium urinæ. The sphincter ani, too, is generally paralysed, and we have a most melancholy and disgusting source of annoyance. The frequent passing of urine and fæces keeps the unfortunate sufferer in a state at once pitiable and loathsome, and when, in addition to his other calamities, the gangrenous sores form, the supervention of low diffused erysipelatous inflammation may prove fatal; or he may be carried off with symptoms of typhus fever from the absorption of putrid matter.

While on the subject of paraplegia I am anxious to lay before you a sketch of some important opinions lately put forward by Mr. Stanley, of London. In the last number of the Medico-Chirurgical Transactions, this gentleman has written a most interesting paper, in which he gives the history of several cases of paraplegia the majority of which were supposed to be examples of caries of the vertebræ, but in which, on dissection, no disease could be discovered, either in the bones of the vertebral canal, or in the membranes or substance of the spinal cord. You will ask, were there no pathological phenomena in these cases? There were, but they belonged not to the spine or its contents, but to an organ in its immediate vicinity, the kidney. From a candid review of Mr. Stanley's cases there appears to be reason to believe that disease of the kidneys may produce all those symptoms which have been attributed to

lesions of the spinal marrow, or caries of the vertebræ. In the four first cases, the symptoms given as of caries of the vertebræ were present, and the cases treated as such. On dissection, no caries, or disease of the cord, could be discovered in any of them, but the kidneys were found to be the seat of extensive disease. The fifth case was a remarkable one: the patient had been admitted for retention of urine, the consequence of severe gonorrhœa, which had been checked by injections. The bladder and sphincter ani became paralytic, and he lost the power of the lower extremities to a certain degree. He also complained of severe pain at the fifth lumbar vertebra. He distinctly traced the pain from the bladder to the left kidney, and then to the right. Paralysis of motion, and, nearly, completely of sensation of the lower limbs, next supervened, and in about a fortnight he died. On dissection the kidneys were found in a state of inflammatory softening, and with numerous minute depositions of pus. The bladder was inflamed, but the brain and spinal cord were perfectly healthy. In the sixth case, a patient, while in progress of cure of a gonorrhœa with phymosis, was suddenly seized with paraplegia. The functions of the brain were unaffected. He had suffered for a day or two from pain in the loins. Sixteen hours after this attack he suddenly died.

From considering the former cases, Mr. Stanley predicted that inflammation would be found in the kidneys. A slight turgescence of the vessels of the cord, with a little transparent effusion in the theca, were found, but the kidneys were in a state of the most intense engorgement. In this case, it was remarkable that from the period of the paraplegia, there was an inordinate secretion of urine. The seventh case was that of a patient who, for two years, had been labouring under pain of the back, increased by pressure, and incontinence of urine. On dissection there was some vascularity and effusion of the cord, but both the kidneys were almost entirely destroyed by disease. In addition to these, Mr. Stanley mentions four more cases, which were seen by a friend of his, Mr. Hunt, of Dartmouth, which corroborate his opinions.

Here, then, we may have well-marked paraplegia without any perceptible organic change in the spinal cord or its investments, but presenting distinct traces of disease of the kidneys. This leads us to observe the very close connexion which exists between the kidneys and spinal cord, a connexion which has been long recognised by medical practitioners, but only in a limited point of view, for though they were of opinion that disease of the kidneys, and a discharge of ammoniacal urine, were the results of spinal disease, they never seem to have reflected that the reverse of this might happen. It seems now, however, to be almost completely established, that disease of the kidneys may produce symptoms which are referable to disease of the spine; and Mr. Stanley has the credit of having been the first who directed the attention of the profession to this circumstance, and his paper must be considered as one of the most important, and practically useful, which has appeared for a length of time. You should all peruse it carefully. The fact that disease of the spine will give rise to affections of the kidney, is long known, and has been proved by numerous experiments. Thus Olliviet details the experiments of a German physiologist, M. Kreimer, who, by dividing the lower part of the spinal cord in animals, made the urine almost immediately ammoniacal. You will also find in Dr. Prout's work, that an ammoniacal state of the urine may be rapidly brought on by injuries of the back from falls or bruises on the spine. It is indeed singular how quickly those profound functional lesions of the kidneys supervene on injuries of the spine, sometimes appearing in four or five days, sometimes sooner. Medical men have hitherto been in the habit of looking at this matter only in one point of view; they know that disease of the spine will produce disease of the kidneys, and here they stop; but it has been shown that the reverse of this may happen, and that renal disease may produce very remarkable lesions in the functions of the spine. Of this very curious occurrence we have many analogies in pathology. Thus, for instance, in several cases of cerebral disease, but chiefly in hydrocephalus, we have vomiting; here we have functional disease of the stomach depending on an affection of the brain. Take the reverse of this,—observe the delirium which attends a case of gastro-enteritis,—here you have the functions of the brain deranged in a most remarkable manner, and this produced by sympathy with an inflamed mucous membrane. The truth is, that in the spine and kidney, as well as in various other parts of the system, we have two organs which are so closely connected by sympathy, that disease of one will bring on serious functional lesion of the other.

Observe then, gentlemen, the great importance of these inquiries. When you meet with a case of paraplegia, you are not at once to conclude that it depends on disease of the spine or caries of the vertebræ. You must carefully investigate its history, and ascertain whether it may be referred to either of these causes, or whether it may not rather depend on disease of the kidneys. That it may depend on the latter cause is now established, for the cases are too numerous for us to suppose the complication accidental. You will observe the importance of making an accurate diagnosis when you consider that this point will most materially influence your treatment. In the one case, your treatment will be directed to the bones and cartilages of the spine; in the next, to the spinal cord itself; and, lastly, to the kidney, a parenchymatous organ, to which

there is a great determination of blood. No one will venture to assert that the principles of treatment in each of these cases are the same; and the chances are, that, if you do not make a correct diagnosis, you will practise improperly and without success. I have now seen a number of these cases, but there were only two of this description in which I was fortunate enough to obtain a post-mortem examination. I cannot say that my dissection exhibited remarkable disease of the kidneys (they were large and very vascular), but, from the many points of resemblance they bore to Mr. Stanley's cases, I was led to conclude, that if they were not examples of actual chronic disease of the kidney, they were cases of lesion of function in the spine, unaccompanied by any organic change to account for the symptoms. I shall briefly detail these cases:—the first was that of an unfortunate man from the country, who was discovered by two friends of mine under peculiar circumstances. While on an excursion they were requested to visit a poor man who was lying ill at a remote farm-house. They heard he had been labouring under a dropsical affection for a long time, and had been treated for ascites. On arriving at the cottage, they found the man lying in bed, with his abdomen very much enlarged; and, on further investigation, discovered that he was quite paralytic of the lower extremities. On examining the belly more particularly, they found that the swelling was produced, not by ascites, but by *an enormously distended bladder*. He had also stillicidium urinæ, with paralysis of the bladder; and this having been mistaken by the medical practitioner who attended him for suppression of urine he had prescribed diuretics, and continued this plan of treatment for some weeks, totally overlooking the paralysis of the bladder. As little or nothing could be done for him in the remote situation in which he lived, it was determined to send him up by easy stages to Dublin, and procure him admission at one of the public hospitals. On his arrival he was received at the Meath Hospital; and, when I visited the wards next day, I found that he was quite paralytic of both lower extremities, that the bladder was in the state above described, and that his health had suffered considerably, and that bed-sores had formed on his back, and were increased by his journey. I prescribed cupping and blistering, which were productive of some slight relief, but in the space of a few days he began to exhibit symptoms of low typhus, as if from the absorption of pus, and sank rapidly. On examining his body, we could not detect any traces of disease in the bones or cartilages of the spine; neither did the cord, or its membranes present any marks of organic lesion, except that towards its lower portion, where it begins to spreads out into the cauda equina, it was perhaps a little softer than natural. I regret very much that I did not note the circumstances of this case more fully; but, as far as my recollection of it goes, the general features were as I have just mentioned. I had another case some time since in the Meath Hospital, in which the following circumstances were observed:—The patient, a labouring man, generally employed about the quays, was brought into the hospital with paraplegia of some standing. The first symptom in his case belonged not to the spine, but to the urinary system; he had had an attack of gonorrhœa, for which he had used stimulants and balsams; and, in some weeks after, without any injury to the spine, he lost the use of his lower extremities. During his stay in the hospital the urine was intensely ammoniacal. On examining his body after death, we could not discover any disease of the bones or spinal marrow. A layer of substance resembling fat or organised lymph was found lying on the theca of the spinal marrow, but it was so very small as to be scarcely sufficient to account for the symptoms. The kidneys were pale, flabby, and without any vascularity, but did not present any marked traces of organic lesion.

Here, then, gentlemen, were two cases which, before the publication of Mr. Stanley's paper, would be considered as examples of organic disease of the spinal cord or its investments; and yet, on dissection, we can find nothing to establish this opinion; and, in the last one, the first affection was of the urinary system.

Is it possible that a *functional* disease of the urinary system may produce also a *functional* disease of the spinal cord?

With respect to the diagnosis of caries of the spine, I wish to make a few observations. The diagnosis where there is distortion of the spine is extremely easy, but this does not hold where the caries is accompanied by distortion. Let us inquire,—Are there any circumstances which would enable us to arrive at the diagnosis of caries without distortion? One symptom, not observed, as far as I can see, in paralysis *connected with disease of the kidney* is, that the patient feels exquisite pain on motion. This is an exceedingly common symptom in caries of the vertebræ, but I am not aware that it occurs in cases where the disease is situated in the kidney or the spinal cord itself. There is another remarkable circumstance:—When the patient attempts to move, he often feels a cracking sensation in the affected portion of the spine; and this has not only been observed by the patient himself, but is also perceptible to his medical attendants. When this occurs, it may, I think, be looked on as a diagnostic symptom. The exquisite pain on motion, the tenderness of the spine on pressure, and the crackling sensation,—these might be sufficient to make the diagnosis of caries of the vertebræ, even in cases where there was no distortion. But if you had a case of paralysis of motion and sensation of the lower extremities, and if these symp-

toms came on without any injury of the spine, if there was little or no tenderness on pressure, if the patient felt scarcely any pain in turning or moving, and if he had at the same time symptoms of disease of the kidney or bladder, and ammoniacal urine, under these circumstances the great probability would be, that it was not a case of caries of the vertebræ, or original disease of the spinal cord or its investments, but a lesion of function of the spine, connected with organic or functional derangement of the kidneys. It must be acknowledged, however, that the diagnosis of this affection is rather obscure. The circumstances which I have just mentioned might enable you to get rid of the opinion that it was caries of the vertebræ or organic disease of the spinal cord, and that it was probably such a case as Mr. Stanley has described; and if you could arrive at this diagnosis at an early period of the case, it would be a matter of great importance. By doing this you would then be aware that you had to deal with an inflammatory affection of a highly vascular organ; you would not be led away from the real state of the case, or waste time in treatment calculated to stimulate the spine, or remove disease of the vertebræ. Your plan would be simple, and your treatment defined, and all your efforts would be directed towards removing the disease of the kidneys. You will easily perceive, gentlemen, that diagnosis is here of vast importance; unfortunately, it is still involved in obscurity.

The prognosis of cases of paraplegia, when once complete paralysis is established, should be always unfavourable. The fact of paralysis occurring is sufficient in itself to prove the existence of extensive disease in most cases. There may be, however, some cases susceptible of cure, and this particularly occurs in young females, in whom a perfect cure has been frequently accomplished by the use of stimulant embrocations to the loins. I have seen one case of this kind, in which the patient was paraplegic for a year and half, cured by the application of hot oil of turpentine over the lower part of the spine. Simple as the treatment may appear in this case, its success was rapid and complete. Mr. Crampton has mentioned to me the particulars of another case, in which the patient's limbs were quite rigid, and could not be moved without great difficulty; in this case, complete relief was obtained by applying Pearson's liniment over the lower part of the spine. This liniment produced powerful counter-irritation, and an eruption of bullæ over the body, which were speedily followed by relief. The patient is now in the enjoyment of perfect health, and since the period of her cure, which is now better than six years ago, has had no return of the disease.

CLINICAL LECTURES ON SURGERY,

DELIVERED AT

THE HOTEL DIEU, PARIS,

BY BARON DUPUYTREN,

PRINCIPAL SURGEON OF THAT HOSPITAL.

Corrected by himself.

Direction of Cavities formed by Balls—Penetration of Balls through the different densities of Tissues—Contusion of Bone—Different Effects in different Bones—Effects of Balls on Spongy Tissue of Bones—Danger from Foreign Bodies in Wounds—Difficulty in extracting Foreign Bodies—Passage of Projectiles through the different Organs—Extraordinary Cases from Gun-shot Wounds—Cure—Effects from Gun-shot Wounds.

Gentlemen,—In my last lecture I explained to you the cause of the difference of size of holes made by the entrance and exit of balls, and to-day I will call your attention to the track of the ball from its entrance to its exit. This hollowed course is in general more or less sinuous, in consequence of the unequal retractility of the different tissues, of the different positions of attitude of the wounded, and particularly from deviations to which the projectile has been submitted. Levacher has seen a ball enter the anterior part of the thigh, and pass out at a point diametrically opposed, without fracturing the femur. Frequently balls have been observed to pierce the anterior part of the forehead, and again perforate the integuments at the occiput, without penetrating the cavity of the cranium; also to strike the sternum, pass out opposite to the spinal column, without traversing the interior of the thorax. Doctor Hennen, quoted by Samuel Cooper, has seen a still more extraordinary fact. A ball, piercing the integuments of the neck, traversed its circumference, and passed out at the point of its entrance. It is easy to explain these facts, by applying to them the different laws of movement. When a projectile penetrates through the midst of tissues of different densities, it is refracted, or, in other words, it is more or less deviated from its direction, and approaches or departs from the perpendicular, according to the comparative density of the different parts, and according to the degree of obliquity at which either of them is struck, so that the projectile may describe an alternative series of angles of incidence, and angles of reflection of greater or less extent, until its movement is either spent, or it has made its escape from the parts.

A bullet, which encounters a bone, acts upon it in different ways. Sometimes it produces only contusion; but this accident, though slight in appearance, is frequently followed by bad symptoms. If the periosteum has not been destroyed, it inflames, and then becomes disengaged from the bone, in which frequently

necrosis supervenes to a greater or less extent. If it presents a structure of a spongy appearance, the inflammation extends to the internal vascular tissue, and may even go further. In the bones of the cranium, almost always, we find the two tables partaking of necrosis at the same time, and the dura mater consecutively becomes inflamed, &c.

When projectiles are animated with sufficient power to overcome the resistance of bones, they disorder them in different ways: The firmer they are, and consequently the less elastic, the more easily they are broken. Flat bones, such as those that form the arch of the cranium or scapulæ, are sometimes as neatly traversed as if made by a punch; at others, irregularly fractured and splintered, exactly in the same way as a ball striking a fragile and thin substance, such as a square of glass, forms a hole more or less irregular, and cracks it to a greater or less extent, according to the direction in which the substance is struck, and whether the ball is at the commencement or near the termination of its course. If it encounters only one of the points of the surface of a long and hard bone, or if it strikes on a prismatic shape bone, as the tibia, for example, it breaks off the edges without fracturing the circumference of the bone. However, long bones, in the centre of which there exists much compact tissue, are generally reduced to a number of fragments of various forms and dimensions; but if the projectile is half spent, or if it strikes the bone very obliquely, the latter may be fractured without being splintered. A similar example was seen in General Rapp, whose left humerus was broken through in the centre, and the ball was discovered in the flesh. A bricklayer, wounded on the 28th of July, 1830, at the attack on the Hôtel-de-Ville, had his right femur fractured nearly in the same way, by a ball which traversed the middle and internal part of the thigh. The spongy tissue which enters into the formation of short and the extremities of longer bones is less adapted to resist the shock, and less capable of distributing it to a large surface. The fragments in such bones are in general more numerous and less extensive, but the fractures extend in most cases to their articulating surfaces, and to the diarthrodial cartilages. This spongy tissue has at times been observed traversed by a ball, without there existing the least fracture, and the opening made has been as regular as if made by a trephine. Finally, if the power of resistance of the bone surpasses the active force of the projectile, the latter becomes deformed in many ways; sometimes it is flattened, or becomes angular; sometimes it becomes indented, or forms several prominent edges; and, finally, its course is checked, or it deviates from it, and wounds the surrounding organs. If it encounters a sharp ridge of a bone, it may be divided. Balls have been seen split thus by the crest of the tibia in two fragments, and each of which had separately made their exit at the opposed surface of the leg. Further, when flat bones that have been struck obliquely are fractured, the ball has been divided by the fragments against which it has encountered. A Swiss soldier was received in the Hôtel Dieu on the 28th of July, 1830, who had been wounded by a ball which fractured the right parietal bone; the ball was split in two pieces, one of which escaped externally through the integuments, whilst the other penetrated the brain, traversed the posterior lobe, and was arrested by the tentorium cerebelli. At the same time we had in this hospital a person, in whom the ball, after fracturing the occipital bone, was partly divided in two fragments, and thus became checked in its progress.

When, in consequence of the resistance of the parts, or from the slight power which the ball conserves, it remains in the wound, it increases the danger of the injury, and consequently demands every attention from the surgeon. This foreign body should always be extracted, though, in a great number of cases, it is no easy task. But in what way can we judge of the presence of this foreign body, in deep wounded parts? The existence of two openings is not always a proof of there not existing a foreign body, for these kinds of wounds receive frequently bodies of a different nature; sometimes it is aprojectile only, or this is accompanied with a portion of the charge, small pieces of cloth or linen, carried with the ball from the garments of the wounded, examples of which I spoke to you of in my last lecture; sometimes fragments of the buttons, at others, bodies carried with the projectile, which has escaped, but the body plunged into the wound by it, being lighter and not being gifted with such a powerful impulse, has not been able to follow its movement. These foreign bodies should be feared in those cases in which the garments of the wounded, instead of presenting merely a simple rent, are discovered to be pierced with loss of substance. As to the projectile itself, it cannot remain in the wound, if the latter has two openings, at least unless the weapon has been charged with more than one ball, or the projectile, in striking the bone, has become divided. I will relate to you a very curious fact, which will show how difficult it is in some of these cases to form a correct diagnosis. In the month of July, 1830, a Parisian was wounded by a ball, which penetrated above the clavicle, and passed out near the inferior angle of the scapula. He picked it up only a few paces from him; it appeared to have the volume of an ordinary ball, and was only slightly flattened on one of its surfaces. In a few months he left the hospital perfectly cured. On being presented to a national institution, he was examined, and a hard foreign body was felt in the neighbourhood of the posterior wound; an incision was made for its extraction, and it was found to be a portion of the ball. It was difficult for us to believe that it

was a piece of the ball which he had picked up, and which he had since then kept, but, in further proof of it, the two fragments were united and weighed, and found to be exactly of the same weight as an ordinary ball.

When the wound presents only one opening, we may generally conjecture that the ball is buried in the wound. It may, however, happen, that the projectile, pushing before it a portion of the garments, becomes lodged in the latter, which forms for it a kind of sac, and afterwards, on undressing the patient, it is extracted; examples of this kind, I also spoke to you of in a former lecture.

Projectiles, the least voluminous, are those which most frequently remain in wounds, and the reason you can easily conceive, for the number of movements, from equal speed, is always in proportion to the mass. Shot are very frequently found in wounds, but it is very rare to find in them projectiles more voluminous than ordinary balls. Nevertheless I will mention an example: on the 29th of July, a child, 14 years of age, was wounded by a Biscaian gun, the ball of which, after having traversed, from before backwards, the left side of the chest, was retained in the integuments of the back. He was brought to this hospital; I extracted the foreign body, which I found surrounded with a considerable quantity of wadding used with it for the charge. Further, we should consider as foreign bodies splinters of bone which are entirely separated from the soft parts, or which are no more than feebly attached. They are much more injurious, as their irregular form renders them very likely to lacerate and irritate the tissues.

There is nothing so varied or so extraordinary, as the course of projectiles in the midst of our organs. I have already spoken of balls which traversed the circumference of the head, the neck, and chest, and explained the mechanism of this phenomenon. The following are examples much more astonishing. In 1830, a man, fighting on the Arcole bridge, received a ball, which entered exactly opposite the internal angle of the left eye; the wound which was directed backwards, and a little to the right side, appeared to traverse the head in different parts. Nevertheless this same ball, after having passed below the cranium, made its exit above the right shoulder. The cure was speedy, and no symptoms of importance supervened. Another labourer, an ancient soldier, placed in ambuscade behind the parapet of the bridge Nôtre Dame, received a ball in the head, during the time he was making preparation to fire his musket. The ball traversed the border of his hat, bruised the right side of his nose, pierced the upper lip, broke four of the teeth of the upper jaw, fractured the inferior maxillary bone, passed out beneath the chin, penetrated the base of the neck behind the clavicle, and was lost in the stump of the right shoulder. This unfortunate man died from inflammation of the chest. There are some organs, continued the Professor, which would appear from their importance, to be unable to sustain wounds without causing sudden death. Nevertheless cases on record prove that there are some examples. The immortal Harvey in making some experiments on living animals, in order to prove the circulation of the blood, found in a stag a bullet, which had penetrated the tissue of the heart. The wound was ancient, and, when the animal was killed, it presented all the signs of good health. At the taking of the Louvre (1830) young Duvin, aged 17 years, received a Biscaian ball, which traversed the left side of the chest, immediately below the base of the heart. An enormous wound had been produced by the projectile, which was the volume of a pigeon's egg; one rib was broken, the lung perforated, so also was the scapula. Nevertheless, after a few days' suffering from intense agony, he became better, and acquired a little strength, in two months afterwards, the wound conserved to us some hopes of his recovery.

But the most extraordinary wound that the Revolution in July caused us to witness is the following:—An harbinger of the ex-royal guard, at the gate of Saint Denis, received a ball, which penetrated from above downwards to the lower part of the hypogastric region. The neck of the bladder, and also the rectum, were largely perforated. The ball made its exit above and a little to the outer side of the anus. From the two wounds issued the urine and fæces; and the ball had fractured the os pubis without entering the cavity of the abdomen. He survived numerous and formidable symptoms, but, by energetic treatment, he fortunately lost them all. On the thirty-fifth day from the receipt of the wound the man had as yet escaped every danger, when acute inflammation supervened and destroyed all hopes of recovery, and on the 10th of September following he died.

There is one very remarkable circumstance which has been observed to take place in gun-shot wounds, which is, that the whole of the soft parts situated in the course of the projectile become gangrenous from its sudden effect. An eschar of some thickness is formed; this must be driven away by an inflammatory process, followed by suppuration. This is an inevitable result, and the knowledge of it is of the greatest practical utility. It is impossible in these kind of wounds to obtain a reunion by the first intention, and frequently it could not be attempted without some danger to the wounded. This fact has been verified by young medical men, who, in 1830, were entrusted with many patients at the Hôtel Dieu. It is, doubtless, this peculiar character which takes place from gun-shot wounds that has made many believe in the combustible action of projectiles.

I will next take into consideration the progress of wounds inflicted by fire-arms, and then successively speak of their different degrees and complication. When there is only

contusion, without laceration, art is generally sufficient to prevent inflammation, or maintain it in its proper limits. But most commonly an acute inflammation sets in, which increases the disorder; the organisation of the soft parts, which have already submitted to a serious attack, passes rapidly into a state of gangrene; and the abundant and purulent suppuration soon becomes altered from its contact with the air. If the injured portions are of great extent, death is almost inevitable; the structure of the tissues, which have been altered by the contusion, cannot resist the inflammatory action. Gangrene sometimes extends much further than could at first have been imagined, and it is then only that can be observed the extent of the disease.

Wounds that must necessarily undergo the process of suppuration are those either confined to the soft parts, or extended to bones; but their cure is much more rapid when they are less deep, when they contain no foreign body, and when the general health of the patient is good.

Traumatic inflammation is, in general, more mild in its course than that produced by ordinary contused wounds, which circumstance has already been noticed by Ambroise Paré, and which gives to those wounds a deceitful but favourable appearance. This inflammation is ordinarily more considerable at the entrance of the wound than where the projectile made its exit, and is frequently of very great severity. If the divided parts abound with fibrous tissue, swelling supervenes, which is attended with the most unfavourable results. Thus tumefied, these parts find an insurmountable resistance from the ligamentous envelopes which surround them; strangulation, and death of the parts take place, or, in other words, gangrene from compression supervenes. This points out the necessity of speedily dividing the parts in connexion with these kinds of wounds, and which experience has, for many centuries, proved to be the best mode of treating them, so as to avoid the deplorable results from strangulation.

The most frequent complication of this kind of gangrene, is that known by the name of *Nourriture d'Hôpital*, which is a very improper designation, for it does not exclusively manifest itself in public establishments. Natural insalubrity of places, incumbrances, &c. &c. appear particularly to predispose to this disease. In 1814, at a time when this hospital was crowded with wounded, many fell victims to this affection. In 1830, the same circumstance did not exist; a number of beds were left vacant, and those that were occupied were placed at a sufficient distance one from the other, so that the air could not become vitiated, and we scarcely had an example of this disease. But, since this gangrenous state developes itself independently of the causes I have just enumerated, it is necessary to recognise the particular influence resulting from the nature of the wound, and the mode of action from the vulnerant cause. Contused wounds, and those inflicted by fire-arms, are those mostly affected. In fact, these were the kind of wounds that were the subject of this gangrenous disease in 1830. When cicatrisation commences, the diseased parts are in a very feeble condition, in consequence of the violence of the contusion, and which singularly disposes them to the action of general causes. If inflammation of the parts supervene, it soon becomes violent, and gangrene of the most superficial part of the wound takes place. There is much pain and swelling; the surface of the wound becomes of a greyish hue; inorganic matter of a thick milky appearance is deposited; with watery and fetid suppuration. The degenerescence is accompanied by an insupportable sensation of heat, for which the patient exposes the wound to fresh air. Much fever is combined with this affection; there is great heat of skin, and want of sleep. The few cases we had in 1830 arose principally in wounds of the hands, feet, and other regions in which the tissues were very dense and abundantly supplied with nerves.

Gun-shot wounds, especially those of the limbs, are frequently complicated with *fractures;* and this is one of the circumstances which offer the most importance. It is rare in such cases to find a bone simply fractured, for, in general, we find it broken into a number of irregular pieces, which, from the violence of the shock, are separated one from the other, and even become buried in the flesh. If we add to these injuries those which the soft parts undergo from the passage of a projectile, laceration of muscle, tendon, fascia, nerves, and vessels, we shall have a complicated fracture, the reunion of which is attended with the most serious inconveniences. The danger is not so great in any other part of the body as in the leg or thigh; in the latter, in consequence of the thickness of the muscles, and aponeurosis; in the former, from the number and volume of the bones. We shall next consider the immediate and secondary effects from fracture, and also the presence of splinters.

Violent inflammation developes itself in the seat of the fracture, and extends throughout the whole limb. The parts which have most suffered from the contusion often mortify, from which there results, after the eschar has fallen away by suppuration, that portions of the bone, more or less considerable, are laid bare; it is not rare to observe this circumstance in fractures of the leg. Suppuration becomes very abundant, the fragments are bathed in pus, they become denuded, and necrosis is the result. The suppuration extends along the fibrous planes, in the intervals of the muscles from the surface of the bones. Another dangerous symptom in this stage frequently supervenes, which shortens the life of the patient. If a fragment of bone is placed in the neighbourhood of an artery, the pressure, more or less slight, which it exercises against the walls of this vessel, pro-

duce erosion, ulceration, and this becomes the cause of secondary hæmorrhage. The leg and thigh have been the most frequently observed to partake of this accident, in consequence of the volume of the bones, and the difficulty of keeing them in an immoveable condition. These hæmorrhages commonly take place at a much later period than those which follow the slough of eschars. M. Pelletan has mentioned a case, in which the discharge of blood took place seventy hours from the occurrence of the accident.

The first species of splinters (*esquilles primitives*) are those detached by a projectile or any other wounding cause; if left by themselves, they lose and cannot recover their vital power: they become foreign bodies, enclosed either in flesh or bones. In flesh they produce abundant suppuration, much less in bones; but they give rise to dangerous fistulæ, if they are not either driven away, which is rare, or absorbed, which still more seldom takes place, or extracted by means of art. What happens in cases of secondary splinters (*esquilles secondaires*), or those which still conserve a slight adherence? Some lose their adherence, become free in the centre of the wounds, and thus re-enter into the conditions of primitive splinters. Others continue to receive a sufficient degree of life from the nerves and vessels. Nearly always, then, united by a callous or hardened mass, the vessels usefully contribute to its formation. The third species of splinters (*esquilles tertiaires*), or those resulting from necrosis, remain stationary, until thrown off by suppuration; unless this process has terminated, the extremities of the fractured bone cannot unite. Nevertheless consolidation begins to take place; the periosteum, cellular tissue, as well as all the soft parts, swell, inflame, become hardened, take a fibrous consistence, after which they become cartilaginous, then in some points osseous. These nutty ossifications extend, and a bony ring unites the two ends by the circumference, or else by their extremities. If the necrosed fragments are too voluminous to be expelled, they are imbedded, like necrosis, enveloped by new bone, and, as in necrosis, bone of new callous formation is deposited. This deposition forms and cultivates fistulæ, results that we have so frequently observed since the termination of the long wars of the empire, and which, since 1815, have brought so many patients into the Hôtel Dieu.

In these cases the limbs are ordinarily shortened or deformed, the callous deposition is voluminous and unequal; on two or three points of its circumference are fistulous openings, either direct, oblique, or sinuous; a probe introduced encounters the osseous caries, and the sound communicated is similar to that produced by a metallic body striking against a bone deprived of sense or vitality.

The indications in these cases are to enlarge the opening, apply the trephine to the callous deposition, and extract the dead pieces of bone.

In general, in gun-shot wounds the *suppuration* is very abundant, and the pus has some difficulty in making its escape, either because the burrow made by the ball is long and sinuous, or because considerable swelling has kept the parts in close contact with one another. It then accumulates in the deep parts, forms several burrow-like cavities, and causes very serious inconveniences. During this period of suppuration, a great number of patients die, either from extreme exhaustion, or from the invasion of some visceral inflammation, or again, sometimes from the re-absorption of pus, or from inflammation of the veins. It is from these latter causes that we find so frequently a great number of abscesses in the lungs, liver, and muscles, &c., these purulent collections, which cause frequently pus in serous cavities or in the synovial articulations. Many observers have for a long time signalised these alterations, as consequences from gun-shot wounds; but we owe to modern pathological anatomical works the discovery of their nature and causes. Finally, amongst the number of formidable complications, it is necessary to add hæmorrhages, particularly consecutive, tetanus, stupor, erysipelas, diffused inflammation, phlegmasia of internal organs, &c., &c.

Reviews.

The Dublin Journal of Medical and Chemical Science, including the latest Discoveries in Medicine, Surgery, Chemistry, and the Collateral Sciences. No. XVI. Vol. VI. September. Hodges and Smith.

(*Continued from p.* 173.)

Dr. Graves next narrates a curious case of "Symmetrical Erysipelas." The subject of it was a young man who had hemiplegia, for the relief of which a seton was inserted in the nape of the neck. Erysipelas supervened. It extended to the face and head, and, after a short sojourn in these parts, "proceeded downwards over the skin of the chest and arms. The outline of the erysipelas was remarkably well defined, and its rate of progression equable; about the fifth day from its first appearance it had involved most of the chest and the upper part of the arms." It occupied the same parts on the one side of the median line as on the other; so that it was distinctly "*symmetrical.*" It is illustrated by two woodcuts, but they do not render the description more clear. Dr. Graves refers to other cutaneous eruptions, where the disease pro-

ceeds at an equal rate from a central point to the circumference; hence "the circular figure" occasionally presented by "lepra, herpes," &c. He alludes to the existence of an analogous phenomenon in the vegetable world, viz. "the fairy ring," which presents an equality "of progression from a central point." The case is curious, and presents a physiological question of high interest. For this regularity of progression, of subsidence in one part, and the retrocedence of the redness to another, are not the pathognomic characters of erysipelas.

It has long been established by pathologists, that a disease, affecting a particular structure of the body, displays a certain series of phenomena; that its progress, its terminations, and its morbid productions are regular and variable, if not interfered with by art. That the pleura when inflamed may terminate in the secretion of serum in great abundance, constituting hydrothorax; or it may throw out lymph, which may coagulate, producing fibrous bands, or it may pour out purulent matter; and the same morbid phenomena are manifested by every other serous structure, by the peritoneum, the tunica vaginalis, the arachnoid membrane, &c. Is it not probable, then, that erysipelas has its seat either in the subcutaneous cellular tissue, or in one or more of the laminæ of the skin; but that in this case of Dr. Graves's there may have been an extension of the morbid process to those structures in which impetigo, herpes, &c., have their residence, hence accounting for the analogy in the course of this symmetrical erysipelas. We are sorry Dr. Graves did not enter into a physiological inquiry on the nature of this peculiarity. His observations would have been interesting.

We have next some interesting and useful observations on the administration of calomel in inflammatory diseases. Dr. Graves strongly recommends its exhibition in acute inflammation, when seated in any organ or any part. Bleeding is of course the first, and calomel is the second, remedy to be employed. Dr. G. gives it in scruple doses once or twice in the twenty-four hours, if the urgency of the symptoms demand it. The great object in view is to mercurialise the system, to produce a change in the vascular and secreting actions. When mercury is given, the following precautions are to be observed,—"the patient must take no cold fluids; whatever he drinks must be moderately warm; barley water, without lemon-juice, should be preferred, and he should not consume more than three pints of drink in the twenty-four hours, as too much drink disturbs the stomach and bowels and favours mercurial diarrhœa."

Fruit of all kinds is to be strictly prohibited, more especially grapes. Dr. Graves objects to grapes in every case where mercury is given, on account of their creating griping and diarrhœa. The exhibition of mercury in small doses in the majority of cases, he strongly reprehends; the blue pill system of Abernethy he rejects as injurious, even in those common cases in which almost every man prescribes mercury, viz. "dyspepsia, constipation, &c." Here perhaps Dr. Graves is in error. The use and the abuse of a medicine are very different positions. That the various forms of mercury in minute doses, carefully and judiciously exhibited, are of immense value, the experience of the whole mass of the profession and the records of centuries testify. On the other hand, that mercury is prescribed too frequently, and even indiscriminately, we witness daily examples, and are free to admit. Nevertheless, so valuable a medicine, in an infinite number of cases, should not be proscribed, because it is so often abused. Instead of fever being aggravated when the mouth becomes affected with mercury, Dr. Graves's experience proves the very opposite effect. "I can assert with confidence, that when fever, produced by inflammation, such as pericarditis, pleurisy, &c., has existed before the calomel was exhibited, the latter will, in nine cases out of ten, produce, at the moment the mouth becomes affected, a marked abatement of fever, a marked diminution of the frequency of the pulse." In answer to the question, whether mercury, employed for inflammatory affections, injures permanently the constitution, Dr. Graves replies in the negative. "I never saw a bad effect follow the use of mercury in cases where the first consequences of its exhibition was the rapid and complete removal of a dangerous inflammation; a remedy can scarcely serve and hurt the constitution at the same time. Mercury, when it abates inflammation, never irritates the system."

Spontaneous Cure of Chronic Ascites.—A lady in Dublin had laboured under ascites for eight years; the abdomen was larger than that of a woman at the ninth month of utero-gestation. Fluctuation was distinctly perceptible; there was no pain or tenderness in the abdomen; the health was not impaired, and the only complaint was an inconvenience arising from the weight of the fluid. The cause of its origin was unknown. Its progression was slow but equable. She took no medicine. During the last year no increase of size was visible. Until within six months ago "the catamenia, which had never been irregular, but constantly scanty, suddenly became profuse," and of more frequent occurrence and of longer continuance. Diuresis supervened to a great extent; urine was discharged frequently, and the abdomen became rapidly reduced in size. Great debility was complained of. Wine negus was allowed, and the abdomen was bandaged. In a few days nocturnal perspirations came on, the abdominal swelling decreased, "and in about a fortnight from the time the diuresis began there was no vestige of the ascites; and the integuments of the abdomen" "hung pendulous." The abnormal symptoms were removed, and the function of menstruation resumed its wonted integrity; and by nutritious diet her health was perfectly restored. "The connexion which this case exhibits between the catamenial discharge and the peritoneal secretion, is interesting in many points of view too obvious to be noticed."

Two cases of much interest are next related. *Diffuse Inflammation terminating fatally in consequence of effusion into the Chest.*—The first occurred in a man, æt. 22, who was admitted into the Meath Hospital for fever. Sixteen days after his admission a swelling appeared on the neck, immediately beneath the jaw; it was not red, but very sensitive when pressed. The same sort of œdema existed in the fauces. He had had pulmonic symptoms, his respiration being 44 in a minute. The lungs sounded well, except at the posterior inferior portions, where slight dulness existed. The inflammation, both on the outer and inner side of the neck, had subsided some days prior to death.

Autopsy twenty-four hours after death.—The cellular tissue in the neck infiltrated with a yellow sero-gelatinous fluid. In the chest, the cellular tissue was found similarly engorged, and its cavity contained about two quarts of a "sero-sanguinolent fluid," which had flocculi of lymph floating in it. The second case was analogous in the chief points to the above, it is therefore unnecessary to present it.

Loss of the sense of Smelling.—The following case is worthy of extraction; we cannot condense it, and at the same time do justice. It presents to the physiologist an interesting subject. "I had lately an opportunity of observing a very singular case of the total loss of the sense of smelling, occasioned by exposure to the effects of a very strong and disagreeable odour. Mr. ——, formerly a captain in a yeomanry corps, was attended by Mr. Barker, of North Britain-street, and myself. He was affected with ascites, and, in the course of conversation one day, mentioned that in the Irish rebellion in 1798, information was received by the magistrates, that five hundred pikes were concealed in one of the markets of this city, buried at the bottom of a large cesspool, which was filled with the offscourings of the market, and all manner of filth. He proceeded to the place, and superintended the work of emptying out the cesspool, at the bottom of which the arms were found as specified. During this operation he was exposed to most abominable effluvia, and suffered greatly at the time from the stench. Next day he found that he had become entirely insensible to odours, and since that, now a period of thirty-six years, he has remained completely deprived of the sense of smelling. From this it appears, that as exposure to very intense light may produce amaurosis, so exposure to intense odours may produce a corresponding affection of the olfactory nerve."

We have next a few cursory observations on the existence of carbonate of ammonia in urine recently voided. Dr. Graves states that he believes he was the first to notice this fact. It is a fact which has been long known, and one not, certainly, of very uncommon occurrence. It frequently follows a severe blow on the back, particularly if paraplegia is produced. The carbonate of ammonia in such cases is attributed to the long detention of the urine in

the paralysed bladder; the elements of it becoming separated by decomposition, and then uniting in such proportions as to form carbonate of ammonia. But cases have been met with, we have ourselves witnessed them, where this salt existed in the pelvis of the kidney, and even in the uriniferous tubes, fairly warranting the inference, *à priori*, that the salt was a secretion, and not the result of chemical decomposition. Nevertheless those chemical changes which create the salt might have taken place in the tubuli and the pelvis of the kidney, as well as in the bladder itself. Dr. Graves has not proved his position, that in cases in which he has met with carbonate of ammonia in recently voided urine, the salt was a secretion, and we confess the difficulty of the task; his facts and his reasoning go far to prove the correctness of the opinion.

We have here a case of anasarca over the whole surface of the body, and when seen by Dr. Graves, there were no inflammatory symptoms or fever present; the disease had been of some weeks' standing, and was attributed to cold. "Urine loaded to an extreme degree with albumen; *skin moist;* constipated; he has some cough and expectoration;" the man's constitution had been broken for a year and a half prior to the appearance of the dropsical symptoms. After purging the bowels, he took half a drachm of supertart. of potass, and a scruple of bark three times a day. Urine became increased in quantity; he had sleepless nights, for which opium was administered.

"Under this plan of treatment his sleep and thirst rapidly returned; his urine diminished in quantity, and became every day less albuminous; he rapidly gained strength and flesh, and, finally, the thirst and swellings disappeared. He left the hospital on the 17th of June, *his urine having, for many days, been perfectly free from albumen.*"

This is one of the cases out of a number where, though there was albuminous urine, yet the patient recovered. Let us give the author's own words. "I have met with so many cases in which the albumen entirely disappeared under proper treatment, that the conclusion seems inevitable, that such a state of the urine may be, and is frequently, produced by mere functional derangement of the secreting organ, and not by such a change of structure as is described by Dr. Bright and others. The word 'functional' is here used as distinguished from permanent and evident alteration of structure."

Diabetes insipidus.—Two cases of this disease are related, and which were cured by opium, administered in the form of the pulv. ipecac. co. Dr. Graves remarks, that though diabetes insipidus is of much less frequent occurrence than diabetes mellitus, it is accompanied by the same constitutional symptoms, and a similar plan of treatment is to be adopted, namely, opium, warm baths, and animal food, the only difference between the two forms of diabetes being in the chemical composition of the urine.

The last, but not the least, interesting original communication is "An Account of a trial of Acupuncture with Galvanism, made by Dr. W. Stokes, one of the Physicians to the Meath Hospital." By John Hamilton, L.R.C.S.I. We need not analyse it, the results having already appeared in the last number of this Journal, embodied by Dr. Stokes in his admirable lecture on paralysis.

Essay on Poisons, embracing their Symptoms, Treatment, Tests, and Morbid Appearances; to which is added, An Appendix, or Means for treating Cases of Suspended Animation. By Thomas Castle, M.D. &c. Sixth Edition, illustrated by 21 coloured Plates. 24mo. Pp. 132. Cox, London.

However much we may abhor the system of "grinding," or of obtaining knowledge from books in so compressed a form, that it is but a collection of aphorisms requiring no employment of the reflecting powers to comprehend, we nevertheless do not object to such a work as this of Dr. Castle's, because, from our acquaintance with pupils, we have repeatedly heard of its great utility. The present, like the preceding productions of the same author, is professedly a mere compilation,—its pretensions are humble; with this we are satisfied. The works which Dr. Castle has heretofore published would do no discredit to any individual. They display great industry in collecting the materials, judgment in arranging them methodically, and talent in embodying them in a concise and yet an intelligible form. The little work under notice has arrived at

the 6th edition,—this alone is a strong recommendation. Let us advert to its contents. It is seldom that we peruse any similar production, but we have glanced over the pages of this, and with pleasure. Its exterior alone would incite to it. It contains a well digested account of the poisonous agents which exist in the three kingdoms of nature; the symptoms which ensue on an over dose, or the introduction of a poison into the system, the remedial measures to be adopted in such cases, and the morbid phenomena presented after death. The chemical tests are well selected and arranged; they are collated from the most accurate of the British and Continental authors. The plates are well executed. Had we to prepare for an examination at Apothecaries' Hall, we should read Dr. Castle's "Essay on Poisons" with great pleasure. It is truly a delightful little volume; every student should possess it.

The Dublin Practice of Midwifery. By Henry Maunsell, M.D., Lecturer on Midwifery, &c., &c. 18mo. pp. 244. Longman.

This is a manual extremely well adapted to the purpose for which the author has written it. It contains a brief description of the female genital apparatus, both its anatomy and its physiology. These topics are well digested in a very concise form. Next we have a description of the gravid uterus, its development, as well as its contents, and the signs of pregnancy, The varieties of labour are perspicuously discussed. We recommend this department of the work to the student and the junior practitioner: it embodies many valuable practical rules. After this come the diseases of the puerperal state. Lastly, is appended a note on the means of resuscitating still-born children. In this article Dr. Maunsell lays down a rule which is at variance with the prescribed obstetric tenets of this country. He recommends heat to be applied to the surface of the body, by holding the infant before the fire on the nurse's lap, in preference to immersion in the warm bath. This advice is offered, not from the results of experience, but from Dr. Edward's assumption that, by placing the child in a bath, the atmospheric air is excluded from the surface of its body, which, he says, is an important agent in removing asphyxia. This is a fact not satisfactorily proved. It is admitted by every one that the application of heat to the body is an important means for restoring circulation, whether the suppression exists in the newborn infant, or from whatever cause asphyxia may arise in after life; if so, most assuredly the application of an equable temperature afforded by the bath must be preferable to applying heat by the fire, when the child may be scorched on one side and cold on the other. But we have a greater objection to the following piece of advice, that "the lungs may be filled once or twice" by inflation from the mouth of the operator, and that "it should not, I think, be done much oftener, and always with the greatest gentleness." This recommendation to students *we* think highly reprehensible. From experience we can assert, in the most unqualified terms, that resuscitation can and has been effected after even half an hour's inflation of the lungs. This is the sentiment, we believe, of the majority of British teachers and practitioners. We strongly recommend that the operation should be continued for at least this period of time. When judiciously applied, we apprehend no danger could accrue; and if but one life has been rescued, it is a sufficient reason for a continuance of the practice. We admit that the introduction of cold air into the delicate lungs of an infant might retard, if not prevent, its restoration; but surely the air from the lungs of the operator is not cold. There is but this exception why the book should not be pronounced a very valuable production: its arrangement is judicious, and the precepts laid down are unexceptionable.

CHEMICAL ANALYSIS OF THE BRAIN.

M. Combe, in a memoir read before the Académie des Sciences, endeavours to prove, from a series of chemical experiments, that phosphorus is one of the elements of the brain, which varies in different individuals, both in health and disease. He states that the brain in health contains from 2 to 2½ per cent; in idiots, 1 to 1½; in madmen, 3, 4, or 4½. M. Combe concludes, "that the absence of phosphorus in the brain would reduce man to the sad state of a brute," an excess would produce madness, and a medium proportion an intellectual creature.

Foreign Medicine.

Case of Extra-uterine Pregnancy, in which the Child passed by the Rectum.

BY LODOVICO BALINDINI.

Margherita Martinelli, a poor labouring woman, who in four years had borne two healthy children, at 28 years of age, in December, 1831, for the third time became pregnant. On the 19th of Jan. 1832, in consequence of a fright, she became the subject of acute shooting pains about the inguinal regions and sacrum, which in a short time subsided. On the 29th she was suddenly seized with fits of fainting, at the same time hæmorrhage discharged from the vagina. In the month of April her breasts enlarged, and discharged a few drops of milk, her abdomen was much tumefied, from which she was constantly in pain; fever supervened, and emaciation made progress. At this time Dr. Ferrari was called in for consultation. He made an examination per vaginam, and found the uterus in its normal state of vacuity; all the symptoms which the patient complained of were attributed to an affection of the uterus. Suspicion was now entertained of there existing extra-uterine pregnancy. Bleeding calmed for a time the pains, but afterwards the abdominal darting pains increased every day, and, towards the commencement of May, the patient said that she felt similar movements to those she experienced in her preceding pregnancies. These movements continued until the eighth month of her supposed pregnancy, at which time they ceased to exist, her breasts diminished in size, and the abdominal tumour appeared to move to either side the woman might think proper to repose upon, at the same time giving a sensation of a foreign body floating in the abdomen. At the end of July, at the usual period of her menses, she had a discharge from the vagina, having the appearance of black blood, and which lasted for eight days.

In September, Dr. Balindini attended the patient, instead of Dr. Ferrari. The woman became the subject of a quotidian fever. In the middle of the month, sharp pains in the region of the sacrum supervened, with similar sensations to those she experienced when in parturition. From time to time she passed scanty muco-sanguineous stools. The uterus remained in a normal state. The finger, on being passed into the rectum, encountered in this intestine a voluminous body, which, when the pains became urgent, descended, but ascended in their intervals. The efforts of expulsion were continued, and the woman was obliged to remain in the same position as when she passed her stools.

By the 22nd of October the pains became more acute and urgent; there was spasmodic contraction of the abdominal parietes; pulse was small and quick, and the woman had an extremely anxious appearance. At this time the surgeon believed an operation the only chance for saving the woman. The finger was again introduced into the rectum, when it encountered a hard, osseous, convex body, which at once he conceived to be the head of a fœtus. He endeavoured to disengage it with the finger, and prescribed emollient injections, hot fomentations to the perinæum and hypogastric region, and at the expiration of a short time he had the satisfaction of seeing an entire fœtus, in a state of half putrefaction, pass from the rectum.

After this the woman experienced contractions and pains of the abdominal region; a discharge of bloody matter made its appearance from the rectum, and in a few days the placenta with its membranes were discharged in a state of putrefaction, and exhaling an extremely fœtid odour. The breasts again became enlarged, as in ordinary cases of labour; a muco-sanguineous discharge continued for some time to be observed from the anus, after which her health gradually improved, and by the twentieth day from her accouchement, she had perfectly recovered; at this period not much lesion of the intestine could be detected.—*Annali Universali di Medicina.*

Case of Strangulation of the Neck of the Uterus, produced by a Pessary.

BY DR. FONTANA.

Antonia Calcagni, 49 years of age, who, in 1821, was confined for the ninth time, after which she became the subject of nervous fever, which left her in an extreme state of debility. Six weeks from her confinement, on taking up one of her children, she felt a sensation in the pelvic cavity of something giving way; after which, in the same region, a sensation of

weight, which increased every day. On examination, prolapsus of the uterus was detected, for which a pessary was used. The pessary caused, from its large dimensions, considerable inconvenience to the woman. Another was used in its place, which answered the purpose of supporting it, without giving her much pain, and she was able to make use of it herself. In May, 1833, menstruation ceased, without any serious symptoms supervening; but in the following month, at the accustomed period, she was unable to extract the pessary, from tumefaction of the neck of the uterus, and from this date it remained immoveable: frequent injections were used to keep the parts in a state of cleanliness. In three months from the use of the pessary, and about one from the tumefaction of the neck of the uterus, she experienced, in the right leg, a pricking sensation; this limb finally became numb, insensible, and the power of movement gradually decreased: she however did not wish to consult any medical man.

On the 13th of February last, after taking a short walk, she was attacked with sharp pains about the uterine neck, in the loins, in the inguinal regions, also the whole of the right limb was similarly affected. In about two hours it disappeared; though, on taking a gentle walk the next morning, the same pains returned; but, instead of being decreased by lying in bed, they became more violent. About 11 P.M., Dr. Fontana was called in. He found the patient in great agony, her countenance flushed and anxious, eyes glassy, spasmodic contractions of the abdominal muscles, which caused her to shriek with pain; pulse hard, and frequent. On examination per vaginam, it was found occupied by a hard, round tumour, elastic, and painful on pressure. He was unable to pass the finger between the tumour and walls of the vagina, neither could he detect the pessary. The tumour afterwards was discovered to be the neck of the uterus in an hypertrophied and strangulated state. Several attempts were made to extract, if possible, the pessary; all, however, proved useless. The tumour was then made to descend as much as possible, and by means of a blunt-pointed bistoury, after repeated incisions, the pessary was divided, and the fragments were extracted. Reaction was speedy; four bleedings were had recourse to in the twenty-four hours, after which leeches were applied, and mild laxatives administered. In the course of fifteen days all symptoms subsided: Dr. Fontana hoped that adhesions of the uterus to the surrounding parts would take place, but the woman not submitting to repose, the prolapsus continued as before.

Two cases similar to the above have been before recorded: one of them will be found in the Bibliothéque Médicale, tom. xvii., p. 259; the other in the Journal Générale de Médecine for 1826. The case above quoted is sufficient to prove the existence of strangulation of the uterine neck, which we have extracted from the—*Annali Universali di Medicina.*

Singular termination of a Nasal Polypus.

BY DR. ROSALIS GIANFALA.

Dominique Ansiello, 20 years of age, has been subject, since 15 years of age, to bleeding from the nose. In June, 1833, after an attack of this kind, he felt some obstruction to the passage of air through the right nostril, and after a short time this clogging of the nostril became more urgent, when he applied to a surgeon for relief, who gave him an injection, from which he found not the least benefit. M. Gianfala saw him on the 9th of October, when he complained of the following symptoms:—involuntary delachrymation from the right eye, which was more prominent than the left; the septum of the nose was pushed to the left side by a large polypus, occupying the right nostril, which extended backwards to the posterior opening of the nares; respiration was difficult; the nasal bones, together with the corresponding part of the maxillary, were carried forwards; the arch of the palate also depressed; the patient experienced lancinating pains; hæmorrhage from time to time supervened, especially when the polypus was touched; it appeared of a sarcomatous nature; the exterior of the nose possessed an erysipelatous blush.

I prescribed injections of lime water, with sulphate of copper, before having recourse to a ligature. During this treatment the tumour remained stationary, the pains increased, and hæmorrhage recurred less frequently and in smaller quantities. At this period a sanious fetid mucus was discharged from the nostrils. On the 12th of December I endea-

voured to discover the attachment, or root, of the polypus, believing it to exist in the maxillary sinus; however, by examination, I found its pedicle arose near the posterior opening of the nares. After this examination, either from its irritation, or from the use of the injection of sulphate of copper, violent symptoms came on; the eye was nearly pushed from its orbit, and inflammation of the neighbouring parts supervened. Leeches and poultices were the remedies employed. On the 15th day suppuration from the internal angle of the eye took place; an incision was made near the tendon of the orbicular muscle, from which was discharged a large quantity of pus. The next day the patient was in tolerable health, and the suppuration diminished; the eye returned in its natural position, the polypus had vanished, and in five days from this time the patient was perfectly recovered.

Analysis of Pulmonary Calculi.

BY PROFESSOR G. SGARZI, OF BOLOGNA.

These calculi, according to the Professor, consist of

Phosphate of lime	1·56
Carbonate of lime	0·39
Carbonate of magnesia	0·06
Animal matter, 0·84, composed of	
Fatty matter, *sui generis*, soluble in æther, insoluble in alcohol	0·06
Cholesterine	0·66
Mucus	0·09
A yellowish-brown non-characterised substance, analogous to mucus or altered albumen	0·03
Oxide of Iron	0·09
Silica	0·03
Loss	0·03
	3·00

—*Bullettino del Scienze Mediche.*

Small-Pox.

Dr. C. A. Neumann in an essay on "the actual condition of the Small-Pox, considered in relation to Pathology, and Medical Police," published in Rust's Magasin fur die Gesammte Heilkunde, gives the history of an epidemic which reigned in Strasbourg in the years 1832, and 1833. From the facts which he brings forward, he draws the following conclusions.

"1st. The small-pox is at present neither so fatal, nor does it disfigure the features so much as formerly.

"2ndly. This modification in the character of the disease has taken place spontaneously, and not as a consequence of vaccination.

"3rdly. This latter, however, retains its preservative power against small-pox, at least for some time."

FROTTEMENT OBSERVED IN PERITONITIS.

COMMUNICATED BY PROFESSOR BEATTY.

As any thing that can contribute to our means of discovering diseases of the heart must be looked on as in the highest degree interesting to the practical physician, it has occurred to me, that a notice of some cases which have come under my observation, although not of diseases of the heart, may serve to corroborate the views so ably set forward and maintained by Dr. W. Stokes, in his paper on the Diagnosis of Pericarditis, in the 4th volume of this Journal. It is there stated, that the opinion broached by Collin in 1824, and which had gained no credence for nearly ten years, is founded in fact, and that we have a physical sign of inflammation of the serous lining of the pericardium, viz. a "frottement," or sensation of rubbing together two uneven surfaces, distinguishable by the application of the hand, and by auscultation. The cases furnished by Dr. Stokes, in illustration of this point, are most interesting and instructive, and accompanied, as they are, by his judicious observations, must be considered as opening a new field in the departments of practical medicine and pathology.—*Dublin Journal.*

SALIVATION BY SARSAPARILLA.

It is mentioned by Cox, in his Narrative of a Residence on the Columbia River, that several of his party who used the fresh sarsaparilla, which grows in abundance in this situation, were salivated by it. This fact is interesting as connected with the antisyphilitic and antimercurial powers of this remedy. We do not know whether the homœopathists have got possession of this circumstance, but, if not, they are heartily welcome to it.—*Dublin Journal.*

PRACTICAL OBSERVATIONS ON THE ESCAPE OF THE VITREOUS HUMOUR IN THE EXTRACTION OF A CATARACT, AND OF ITS INFLUENCE ON THE SUCCESS OF THE OPERATION.

BY M. CARRON DU VILLARDS, M.D.

When we reflect that an accident may often cause the failure of the easiest and best performed operation, we cannot pay too much attention in searching for those means which may remove the causes which operate thus unhappily. It is only by attentive and exact observation of facts that we gain this end, and we are often surprised to find brilliant theories, almost universally admitted, crumble into nothing before the evidence of practical facts.

The remark that has just been made applies more especially to the escape of a part of the vitreous humour in the extraction of a cataract, whether it takes place in the first or second part of the operation. One is really astonished to see the difference of opinion on this subject; but this astonishment will be much increased when we learn that Beer, who had the reputation of being a skilful and judicious observer, indicated the precise quantity of vitreous humour which must be lost to produce such and such effects. Thus, according to the Vienna Professor, the escape of an eighth, or even of a fourth, of this humour has not any, or very little, influence on the success of the operation; if, however, a third be lost, the chances against it are much increased, and the patient would run great danger if half should escape. Experience has long since given judgment on these theoretical opinions; and, besides, I am well aware that, on his own part, Beer dreaded this accident very much, however slight it might be; differing, therefore, greatly from Roux, who says, that the loss of a certain quantity of vitreous humour does not produce any injurious consequences, especially if the eyes are large. Facts drawn from the practice of this Professor are altogether contradictory and opposed to his doctrines; for M. Theodore Maunoir, in his inaugural thesis, states, that of nineteen operations performed by M. Roux at La Charité, in which the vitreous humour escaped, six only proved successful. As to myself, the study of facts has proved to me that the escape of this humour is a symptom always to be feared, the more that we are unable to limit its extent. The hyaloid cells once broken, the eye may be completely emptied, which I have seen happen several times at Pavia to Professor Volpi. This accident is, in most cases, owing to pressure imprudently exerted and kept up on the organ by the fingers of the assistant and operator, at the moment when the section of the cornea is completed. This happens the more frequently when the directions given are not very precise as to the degree of pressure which ought to be employed, so as not to cause any unpleasant symptom. Richter, for instance, speaks thus:—"*Digitus ille qui palpebram inferiorem deprimit, comprimit simul paululum oculi, et sic illius motum cohibet.*" What can be more uncertain than this word *paululum*, since it does not define the degree of pressure to be employed, and the time when it should cease.

In operative medicine, a *little* signifies nothing, as Lisfranc has very judiciously observed in his excellent course on operations. The same reproach attaches to the directions given by Lafaye. Ware, whose opinion bears such great weight in the operations for cataract, is of opinion that such vague principles as those put forth by Richter and Lafaye lead to great danger, by causing the operator to dread continuing pressure too long, or leaving it off too soon. This celebrated English surgeon rectified the opinion of Richter in this manner,—"moderate and regular pressure may be continued with the most perfect safety on the inner and inferior part of the sclerotica, not only until punctuation is complete, but until the point of the knife has passed through the other side of the cornea, a little below its transverse diameter. This having been performed, the pressure exercised by the operator ought to cease, and his assistant ought in no way to press on the globe." I am fully persuaded that these directions ought to be completely followed, and then there will be less danger of losing the vitreous humour.

There are some persons who are more subject to this accident than others; they are those whose skin is easily wounded, and who are of a strumous diathesis, with swelled and prominent eyes. In these individuals, evidently of an irritable temperament, all the muscles

of the eye contract at once, and draw it to the bottom of the orbit, acting like the orbito-sclerotic muscle of animals, and this is the principal cause of the difficulty experienced in operating for cataract by extraction. This accident is more to be feared when both eyes are operated on at once, because while the one eye is under the knife, the other contracts and expels its contents. It is not long since I witnessed this accident, which would not have taken place if each eye had been operated on at different times. Moreover, this accident is much more frequent when the patient is seated during the operation, than when he is lying down, because the resistance which the crystalline lens and the aqueous humour offer to the vitreous being suddenly removed, the cells of the hyaloid membrane have not sufficient strength to prevent the liquid they contain following the general laws of gravity.

However this may be, the loss of a certain quantity of the vitreous humour gives the patient a sensation of a vacuum in the eye whenever he moves the head. On examining the organ, we distinguish a slight trembling, which is communicated to the aqueous humour. Sometimes a simple hernia of the vitreous humour takes place, which will prevent cicatrisation of the cornea for several days; but this latter finally destroys the protrusion, by acting like a ligature on it. Experience has proved that its excision has been always unattended with advantage, inasmuch as the hernia was immediately reproduced, and that attempts to remove it with forceps caused great pain and dragging on the vitreous humour, which might induce serious symptoms.

When nervous men or hysterical women are operated on, it is not uncommon to see supervene, even during the operation, an involuntary spasmodic contraction of the eyelids, known by the name of blepharospasm, and which frequently offers serious impediments to the completion of the operation. This spasm resembles that under which children labour who are affected with strumous photophobia, and who close their eyelids the more readily the more they are desired not to do it. This contraction of the eyelids during the operation for cataract, is one of those causes which most frequently produce the partial or complete expulsion of the vitreous humour; and, when both eyes are operated on at once, I have often seen the left eye discharge its contents while the right was under the knife, and *vice versâ*. Ought not this accident, which we have already signalised, to engage operators to extract the cataract from one eye at a time?

If the blepharospasm is violent, the completion of the operation must be deferred; if the section of the cornea has been made, it is advisable to wait until the patient is quiet, before the crystalline membrane is lacerated, and the lens extracted. The patient should be tranquillised, his attention drawn to subjects foreign to the operation, an anodyne administered, and linen wetted with perfectly fresh water applied to the nucha. I have seen this plan succeed several times. The remarks just made apply equally to the rotary motions of the eye, which are only dangerous when attempts are made to overcome them suddenly.

As soon as the operation is completed, in order to prevent any consecutive escape of the vitreous humour, it is necessary to bring the eyelids carefully together, and to keep them in that position, laying the patient on his back, and recommending him not to move the head, and especially not to talk. These precautions should be observed until cicatrisation of the cornea has taken place, when there will not be any further danger of losing the vitreous humour.—*Révue Médicale.*

Remarks.—On a careful perusal of the foregoing essay, there will be found consigned in it a great deal of practical information, with a little false, but probable theory. Several of our author's data are completely one-sided, and he does not appear to have taken into consideration so much the arguments advanced by his opponents, as he seems to have considered the conclusions at which they have arrived. He endeavours at once to place an extinguisher on the statements of the celebrated Beer, by treating them as ridiculous, instead of bringing forward arguments, and a detail of facts to combat them. To say the least of it, this is bad taste. The reasoning, on which Beer supported his doctrines, is kept in the back-ground, and Roux meets with scarcely better treatment. M. Villards should have been rather more circumspect in bringing forward one of the old bugbears of ophthalmic surgery; the real dangers, attending the operation in an unpractised hand, are sufficiently

numerous to render the task of increasing them exceedingly ungracious, and we should think ungrateful. It will be seen that the opinions enunciated by Dr. Villards are directly contrary to those promulgated by Mr. Guthrie in his valuable essay on the extraction of cataract, and also to those of perhaps the majority of practical surgeons. Our author seems to regard a partial or complete loss of the vitreous humour as a most dreadful calamity, and highly to be deprecated. It is, certainly, an accident which it is as well to avoid, as its occurrence would tend to alarm an operator who is at all nervous, and would also give the appearance of unskilfulness, but it certainly is not of that great moment and importance which the essayist wishes the profession to consider it to be. He rather appears to think that the secretion of the fluid would not take place afterwards, by the symptoms he gives as indicating its occurrence. We are, of course, to conceive these as being present a few weeks, or, at least, days, after the operation, for a surgeon would not require such symptoms to prove to him that a loss had taken place at the time, nor would he like, either then or for a few days after, to direct the patient to shake the head, in order to ascertain the existence of a vacuum in the eye, or to examine the organ itself, in order to perceive the trembling of which the author speaks. If the operator was at all acquainted with physiology, or with the progress of the surgical science, he would be aware that the vitreous humour is as surely reproduced as the aqueous, although more slowly. In fact, there is a constant change going on in the human frame of absorption and reproduction, and although physiologists, as yet, have not been able to distinguish the absorbents in the eye, there can scarcely be a doubt of their existence. What say we? there is no doubt; do we not see in hypopion the pus absorbed? do we not see after iritis the effused lymph absorbed? do we not see after tapping the anterior chamber that the aqueous humour is again poured out, and that in the course of twenty-four hours? and do we not know that where nature has placed organs of secretion there are also those for absorption to keep the scales equal? If, then, our author doubts that the vitreous humour can be re-secreted, let him refer to physiological principles, and he will be satisfied; let him refer to the annals of surgery and he will no longer entertain doubts: cases are on record, in which the *whole* of the vitreous humour has been evacuated, and yet the eyeball has filled again, and good vision obtained. In one of the French journals, a few years since, a case was consigned, in which the sufferer, a sergeant we believe of the guard, had the eye ruptured by a severe blow, and its contents discharged. Proper treatment was adopted, and, in the course of a few days, the surgeon, who fully expected that the eye was lost, was surprised to find that the globe had resumed its original size, and that the man obtained tolerable vision with it. Not very rarely, in the performance of the operation for extraction of the cataract, while the surgeon has been endeavouring to lacerate the crystalline capsule, by a sudden effort on the part of the patient, or some other unforeseen accident, the whole of the vitreous humour, with the lens seated in it, comes out *en masse*, and the eyeball sinks. Here one would suppose that the eye was lost for ever, yet even in these cases there is hope; the humours have been secreted again, the ball has resumed its spherical form, and tolerable vision has been regained. We have heard of an instance in which this accident happened to a very clever surgeon in both eyes; the patient was the mother of a medical man, we believe, at Hammersmith, or in that neighbourhood. In this case both eyes retained their secreting power, and vision, to a certain extent, was restored. The operations were performed one after the other, but the humours had escaped from the first eye ere the other was touched.

Beer was of opinion that the loss of an eighth, or even of a fourth, was of little consequence, but more might endanger the safety of the eye. We must confess ourselves unable to see the reason for this; we have shown that even when the whole is lost, the injury is not irremediable, on the contrary, that patients afterwards may have a good eye. If any of the humour be lost, it is better perhaps that a fourth or even a third should escape, than a sixth or an eighth; because inflammation is a necessary consequence after the operation, and the vacuum our author describes will give space for the inflamed parts to swell, which the tense sclerotic would

otherwise prevent. This therefore presents us with a powerful reason in favour of some loss of vitreous humour, which of itself is not an injury to the eye: there is, however, one circumstance attending it, which our author has alluded to without signalising the real source of mischief. We allude to the hernia of the vitreous humour, or a protrusion of some portion of this viscid substance between the lips of the incision; this will prevent immediate reunion of the wound. Thus far Dr. Villards and ourselves agree; but he has forgotten to particularise the principal, we may almost say, the only, danger attending it, namely, the lips of the wound being kept apart, the iris is inevitably drawn in between them, and *polapsus iridis* ensues, consequently an irregular pupil takes place, with a very great probability of iritis. It is almost impossible to prevent this accident, when the hernia just alluded to occurs; and it is very extraordinary that our essayist should have omitted it in his classification, or rather enumeration, of the ills to which the escape of the vitreous humour makes us liable.

We may add, however (and much credit is due to Dr. Villards for the observation), that a valuable remark is consigned to the memoir under notice, with a practical deduction from it. We allude to the operation on both eyes, as performed at once. It is very certain that in children, nervous men, and hysterical females, where we have reason to dread the supervention of spasm, or those struggles which will tend to prolong the operation, and render it difficult, but one eye should be operated on at once, as it is very useless and exceedingly improper to incur any risks which may be avoided. The rule laid down by Mr. Guthrie, that elderly persons could bear *once* the necessary treatment, but not *twice*, will not hold good here; for better is it that they should be content with one eye, not being able to go through the proper regime for the second, than that, by too great a desire to benefit them, such an accident should occur. In the hands of a young surgeon, it would go far to ruin his reputation.

We fully agree with our author, that, in cases where hernia of the vitreous humour takes place, it should not be meddled with; excision and traction are equally improper; as detrimental as examining the eye at a period so early as to enable the observer to discover the existence of such a symptom. We are well assured that this hernia will not last beyond the third, or at most the fourth, day, and certainly before that period the eye should not be examined.

We have now accompanied our author through almost every paragraph of his essay; we have examined it carefully, and, having judged for ourselves, have pointed out in what we differ in opinion with him, and where we could have praised him. Ere we conclude, we may perhaps be allowed to say that Dr. Villards has shown himself an ingenious and talented physician. We hope to meet with him again in print, but would recommend him to reconsider the subject of his present essay.

THE KING OF PRUSSIA AND DR. GALL.

The King invited Dr. Gall to a splendid banquet. "Doctor," said the King, when the repast was finished, "will you have the kindness to explain to these gentlemen the various dispositions which their bony systems indicate." The Doctor instantly obeyed the royal command. The first person he examined was a man of colour, and named at the table "General." "Speak out candidly," said the king. "His Excellency is fond of hunting," said the Doctor, "and other violent exercises, and must certainly be in his true element when on the field of battle, &c." The next:—"This gentleman must excel in gymnastic exercises, must be a great runner, and partial to all the manly sports." "That will do, Doctor; the first is an assassin, and the other the greatest pick-pocket in Prussia."

WARDROP ON THE EYE.

We are happy to find that this valuable work, which for a long period has not been able to be had, has at length been reprinted, and the few imperfections which existed in the plates of the former edition have been revised. This work must greatly facilitate the student in forming a true diagnosis in the abstruse and difficult part of surgical science on which it treats. We need not further eulogise on the value of this production, as its important contents are already so well known to the medical world.

THE

London Medical and Surgical Journal.

Saturday, September 13, 1834.

QUACKERY AMONG THE LICENTIATES

"ADVICE.—Two PHYSICIANS (Licentiates of the Royal College of Physicians, London) ATTEND alternately at Mr. WRAY'S ESTABLISHMENT, 118, Holborn Hill, from one till two o'clock every day. Patients calling at that hour receive the Physician's advice FREE OF EXPENCE, and any medicines prescribed are dispensed at the institution, at the usual druggists' prices. A Surgeon and Apothecary in constant attendance. MR. BUTLIN, Surgeon, late of the New Road, St. Mary-le-Bone, may be consulted from eleven to one o'clock daily, principally for diseases of the chronic, and some few cases of the acute, kind, for which he has been long known to possess a specific, or a specific plan of treatment. Two hours every evening (from seven to nine) are devoted to surgical cases."—*Morning Herald, Sept. 4th*, 1834.

IN our two preceding leaders we made some cursory observations on the character of the medical profession. We stated that there is quackery even in every branch of it:—the above advertisement is one of the proofs. We endeavoured to show what the members of the medical profession should be. That they should be collectively and individually honourable men, men of high dignity and integrity,—that they should scorn to perform an action unworthy of their profession for mere lucre. What a precious document the above is! It is a disgrace to the Licentiates of the Royal College of Physicians. We know not that a more powerful argument could be advanced of the imperative necessity for a reform in our profession:—surely this species of traffic will be prohibited, or that punishment shall fall on the heads of such traitors. Is it dishonourable for "Dr. Eady" to advertise himself in the newspapers? unquestionably not! He is what he pretends to be,—a quack; he announces his nostrums, and retails them with unblushing effrontery; he has subscribed to no collegiate regulations; he has not pledged himself to support the dignity of the medical profession. But those two advertising Licentiates *have given their pledge*, not to perform actions which may disgrace the profession. "Two physicians" attend on alternate days at a shop in Holborn Hill to give advice, FREE OF EXPENSE;—how charitable it is of them! What benevolent souls they must possess,—and perhaps they reside in the suburbs of town, far remote from Holborn Hill. Perhaps they are in extensive practice too, and wish that the poor should receive the benefit of their charitable advice. Charity, like mercy, "blesseth him that gives and him that takes;" they will be rewarded! and we cannot withhold our meed of praise for their benevolence. We have not to consider the subject abstractedly, whether these Licentiates, by giving advice gratis, are performing an action justifiable in the eyes of the public. This is not the question. We accuse them of doing what the great mass of the profession regards as being derogatory to it, as a body of educated and intelligent individuals. The action itself is not bad. We do not object to the principle of these men giving advice *free of expence*. Indeed, are they not remunerated? The announcement of *advice free of expence*, with *but pay for the medicine*, is a trick daily practised on the ignorant portion of the community. Such conduct would be reprehensible even in an apothecary, whose poverty might be as great as Shakspeare's character in the play. But when performed by two Licentiates of the College of Physicians, by men whom we

have a right to presume have received a respectable and liberal education, classical as well as scientific, and who have sworn to maintain the dignity of their profession; by thus violating its laws they are committing a grievous offence. And let us remind them of what they ought not to forget, that for such an action they are liable to expulsion from the College. The College has but to prove that these men are hirelings of the proprietors of the said drug establishment, that they receive so much remuneration per diem, or a certain per centage on the profits, which arise from the medicines dispensed "*at the usual druggists' prices.*" Let these Licentiates look to it. Sooner or later they *must* be rewarded.

A surgeon also attends. His benevolence exceeds even that of the physicians. He devotes, we perceive, no less than two hours daily to distribute his *specific* for the *benefit of the poor*, of course. What other motive could induce him to perform such an arduous duty,—save *charity!* Unfortunately, the college to which he professes to belong has enough, apparently, to do to take care of itself, without exercising any surveillance over its members, even if they possessed the power; this is too notorious to demand from us a single comment. The poor "surgeon and apothecary in constant attendance" are beneath our notice.

CHOLERA.

We have carefully watched during the whole of the summer the rise and progress of this direful malady: we have traced it at home and abroad, observed the numerous phases it has assumed in different places and at different periods: we have witnessed the success of one mode of treatment and the failure of another, and frequently the inefficiency of all. We cannot, in this article, enter fully into the subject, the observations must be desultory and general. That cholera daily arises without even a shadow of proof of its originating from contagion, facts can be adduced in ample abundance. Whether it be the cholera that devastated every quarter of Europe during the last year, and where it has lain dormant during the intervening months, are problems which no one, we presume, is prepared to solve; and even, if satisfactorily determined, could neither prevent its aggression, nor assist us to any specific and certain plan of treatment. One point is generally admitted, viz.—that the attack is usually preceded by diarrhœa; the appearance of this symptom, therefore, is to be regarded as a probable precursor of a violent attack. Hence appropriate measures are to be resorted to without delay. But when the urgent symptoms appear, we know not what is to be done. Calomel and opium, in almost every form and dose, have had their day; and a multitude of other remedies, with equal pretensions, have suffered a similar fate. One man cured the disease by mustard emetics, but in the hands of another they were useless. The saline treatment had its advocates and its day. Now, salt and water, so as to produce vomiting, is an astonishing agent. We believe it to be the best. We have the testimony of Dr. Pidduck, Mr. Beaman, &c., and amongst our private acquaintance we hear of its advantages daily. The chief object is to excite a full flow of bile, avoiding the depressing effects which ensue after the exhibition of other emetics.

The number of cases of cholera in town during the present season, has been infinitely less than in the last year, and much less fatal; and we announce, with

great pleasure, that cholera is just terminating its career. There are now very few cases in London.

INFLUENCE OF BELLADONNA ON THE IRIS.

To the Editors of the London Medical and Surgical Journal.

GENTLEMEN,—From having, this some time past, paid considerable attention to the action of belladonna on the eye, with a view to endeavour to account for its remarkable property of dilating the pupil, it appears to me that the explanations, given at the present day, are completely erroneous, I would beg leave, therefore, to present to the profession, through the pages of your valuable journal, the result of my observations.

It is unnecessary for me to enter into the different theories that have been formed, respecting the structure of the iris, as they are but little connected with the present subject; it will be sufficient for me to state that it is now generally conceived to be muscular, and to consist of two sets of fibres, the one radiating, the other circular, the former stretching from the greater towards the lesser circumference of the iris, producing dilatation of the pupil, the latter surrounding this aperture, producing its contraction; the only, or, at least, the principal, objection to this theory has been the opinion that has hitherto been entertained respecting the action of belladonna in producing dilatation of the pupil, when applied to the eye, or indeed any part of the body. On the supposition that this is the structure of the iris, the theory of the action of this plant has been, that it paralyses the circular fibres, and that thus the radiating fibres dilate the pupil, but why not (it has been fairly asked) paralyse both sets of fibres? So formidable, indeed, has this objection appeared, that it has been stated that the radiating fibres are elastic, not muscular, and thus produce dilatation of the pupil when the circular fibres are paralysed. I need, hardly state, I believe, in opposition to this theory, that if such were the case, the pupil should be always dilated in the dead subject, which it is not; but without further discussing those different theories, how are we to explain the action of this plant? Simply, in my opinion, by stating that it acts on the *retina*, and thus lessening its sensibility, whether morbid or natural, the pupil sympathetically dilates; in proof of which I shall adduce the following facts.

I have seen belladonna frequently applied in deep-seated ophthalmia, where great intolerance of light, evidently indicating increased sensibility of the retina, was one of the most prominent symptoms; in every case where I have made the necessary inquiries, the patient, as soon as the poison began to act, experienced considerable relief from the symptoms, although the pupil became dilated, and consequently a greater quantity of light was thrown on the retina, the reverse should have occurred if the belladonna acted, as is generally supposed, on the iris alone.

By the long continued use, or by an over dose of this substance, amaurosis will be produced.

Its action, when taken in large quantities, is evidently on the nervous system, producing vertigo, amaurosis, paralysis of the stomach and intestines.

It is a most useful application in painful affections of other nerves, where they are not produced by violent inflammation.

Should the above theory be found correct, belladonna may become a useful remedy in many other nervous diseases.

I am, Gentlemen,
Your obedient servant,
MALCOLM W. HILLS.

Dublin, 19*th July*, 1834.

CHOLERA FROM EATING RICE.

To the Editors of the London Medical and Surgical Journal.

GENTLEMEN,—I beg leave to forward for publication in your Journal, the following facts, which were this morning communicated to me by Mrs. Smythe.

I remain, Gentlemen,
Your most obedient servant,
R. TYTLER, M.D.

Mrs. Smythe, a lady of high respectability, living in the Strand, communicated to me, this morning, September 6th, 1834, the following facts.

In the summer of 1832, in about half an

hour after partaking of *rice soup*, which was composed of *rice*, *turnip*, and *water*, she was seized with most violent pain of her stomach and bowels, attended with *all* the symptoms of *cholera*. The quantity of the broth which she swallowed amounted to about half a quart. Another lady, who was in the house at the same time, also partook of the soup, and she was likewise affected precisely in a similar manner. Both patients recovered in consequence of prompt medical assistance. In about a fortnight afterwards, Mrs. Smythe, not suspecting that the *rice* was the cause of her malady, again partook of the same kind of soup, made with *rice*, and was a second time affected precisely with the same symptoms. She has never since that period, under any circumstances, made use of *rice* for food.

Mrs. Smythe has authorised me to say, that she is *convinced* it was the *rice* which made her ill, and states that the other lady, who is since dead, was of the same opinion. She also has authorised me to mention, that she is ready to declare the above facts and this *conviction*, before any person, and at any time she may be called upon.

She ate the *rice* in London; the grain was *broken* small, and had the appearance of having been exposed to water.

The above facts, certified with Mrs. Smythe's signature, are now in my possession; and, after a perusal of the above statement, your readers will possibly agree in opinion with me, that there is no occasion for the medical practitioners of this metropolis to travel to India for cases of *Asiatic cholera* produced by eating *rice*. Grain of the description mentioned by Mrs. Smythe is now sold at 2*d*. per pound throughout London, and has obviously undergone a process of *bleaching*, so as to render this *deleterious* article the more *marketable*.

R. T.

SURGERY AND ANATOMY.

To the Editors of the London Medical and Surgical Journal.

Gentlemen,—As the season is fast approaching when the metropolitan schools will be again replenished with young men in pursuit of medical science, permit me, through the medium of your highly-valuable and widely-circulating Journal, to draw the attention of our professors, and the pupils generally, to a *remark* made some years ago by Sir Charles Bell, as to the necessity of combining the anatomy and surgery of a part *intimately* in the lectures.

As the liberal advancement of the profession has always been the leading feature of your Journal, I am sure you will agree with me that no apology is necessary in giving the remark I have alluded to a full quotation:—

"Not only in teaching are the practical views and inferences," says Sir Charles Bell, "separated from the demonstrations of anatomy, but the parts of the body which ought naturally to be studied together are disjoined. The component parts of the same organ are demonstrated at separate periods of the course, and the student is still referred to some future explanation, which is necessary to complete the view of the subject. In this distracted way of viewing the subject, the data upon which one would rationally ground an opinion, that is, to be useful in practice, are scattered and lost sight of, and the time is consumed in a circle of dry and unprofitable demonstrations, fit enough for the dissecting-room, but altogether unsuited to those higher objects, those practical inferences, those useful and masterly combinations, which, in the theatre, ought to teach the student how to think as a physician or a surgeon, reasoning on the principles with which anatomy supplies him."

Sir Charles then goes on to state the mode which he himself adopted, and which, if followed by other professors, would no doubt lead to very favourable results.

"At public lectures the demonstrations of the anatomy are repeated, and those parts with which the student is familiarised in the rooms below are again placed before him,—his knowledge of the subject is resumed and refreshed, but further views are opened upon him. He is now taught to consider the parts of anatomy, as in the performance of their functions as living parts; to observe their uses, their structure, their natural functions, and their derangement; and never to lose sight of the result of those various views, as offering themselves in practice, and requiring the exercise of the surgeon's skill. The consequence of this manner of teaching must be a gradual and progressive improvement of

knowledge, even if the teacher has nothing but method to recommend him. Of the effect of it in some respects, the profession may judge by what has been done relative to the nervous system *."

I shall now conclude, gentlemen, by observing, that if an understanding existed between the lecturer on anatomy and the lecturer on surgery, previous to the assumption of their duties in the lecture-room, the method that Sir Charles Bell recommends might be easily carried into execution.

I remain, Gentlemen,
Your obedient and very humble servant,
A Pupil of Little Windmill-Street School.

CASE OF INJURY OF THE BLADDER.

To the Editors of the London Medical and Surgical Journal.

Gentlemen,—I shall offer no apologies for requesting the favour of your inserting in your valued publication the following outline of a case of severe injury to that important organ, the bladder, which has recently fallen under my care.

A young man, the driver of a coal team, imprudently ventured to ride on the shaft of his waggon whilst labouring under powerful feelings of sleepiness, and being in some degree inebriated at the time. When in this position, and soundly asleep, he fell before the wheels of the waggon, laden with at least a ton weight of coals, the fore and hinder wheels of which passed over his abdomen, and left him motionless and insensible. Being summoned to visit him, I found, on examination, that the wheels of the waggon had run directly across the hypogastric region, and had left their track easily enough traceable by the abrasion and tumefaction of the integuments. The abdominal muscles appeared to have suffered considerably, especially on the left side, and at their origin and insertion into the crista of the ilium of the same side, where the first wheel appears to have commenced its course, as the poor fellow laid upon his back. No other part had sustained any material injury. It was to be expected, that should the bladder have contained any considerable quantity of urine at the time of the accident, that its escape from hurt would be extremely improbable; and I should, had I been provided with a catheter at the moment, have deemed it, above all things, necessary to have introduced that instrument immediately. He soon recovered from his state of stupor, and had, during the time I had left him to procure a catheter, made several attempts to pass his urine, but to no avail; the injury to the abdominal muscles, &c. being probably the chief cause of his inability to evacuate the accumulated contents of the bladder. On my return to him he was distressed with pain in the hypogastric region, which was much enlarged and of a high temperature, the pulse too had risen considerably; there was great sickness; repeated rigors; and in short a violent reaction. On the introduction of the catheter, which passed with the greatest facility, a large quantity of blood and urine was drawn off, which gave instant relief. He was bled to approaching syncope; purgatives given, but the incessant sickness prevented their retention, and an enema was subsequently administered, which answered well, and also afforded much ease. He was ordered to take *no liquids*, in order that the bladder might be kept in as complete a state of rest as possible, and to be confined to the antiphlogistic plan of treatment altogether. Leeches were applied over the bladder, also the spirit lotion. Owing to the accumulation of but a small quantity of urine, giving rise to excessive pain in the bladder, and as the catheter could not be borne to be left therein, for the same cause, I was under the necessity of drawing off the contained blood and urine every three or four hours.

But notwithstanding these active measures being pursued, the constitution seemed disposed to set up an acute inflammatory action, the pain increased, the abdomen became tympanitic, sickness more severe, and the pulse and other symptoms of fever augmented. These symptoms were particularly severe on the second day after the accident, and they were met by copious and repeated bleedings, regulated, however, not by any specified amount of weight or measure, but proceeding

* Preface to Observations on Injuries of the Spine and the Thigh-Bone. By Charles Bell, Surgeon to the Middlesex Hospital. 1824.

on the ground of stopping only when the unfavourable symptoms vanished, let the amount abstracted be what it might. Leeches were again applied to the abdomen, and hot fomentations frequently used. On the third day the bladder recovered its lost function, and the patient was capable, with tolerable ease, to evacuate its contents, which had now become free from blood; the stomach became reconciled, and every other part of the case appeared equally favourable, so that in less than a week the man was conveyed to his friends some miles off, and from under my care.

ROBERT EMINSON.

30, *Great Dover-road, Borough,*
September 8th, 1834

UTERINE HÆMORRHAGE FOLLOWED BY ASCITES.

To the Editors of the London Medical and Surgical Journal.

GENTLEMEN,—If you think the following worthy of a place in your Journal, you will have the goodness to insert it.

March 5th, 1833.—Mrs. W., aged 53, mother of seven children, youngest nine years of age, since the birth of which has menstruated regularly until June last. For some weeks previously she complained of uneasiness, tenderness, and occasional pain in the left hypochondrium. Had up to this period enjoyed uninterrupted good health. In June she was suddenly attacked with profuse uterine hæmorrhage, which continued with more or less severity for some weeks, since which the menses have appeared regularly, but in diminished quantity; last menstruation five weeks ago. In the latter part of December, she noticed an enlargement of the abdomen; pain and tenderness in a short period commenced in the left hypochondrium, with darting sensations in various parts of the abdomen, particularly in the region of the transverse arch of the colon. Abdomen has continued to enlarge; general health and spirits good; extreme thirst, especially in the night; fluids rather aggravate than diminish thirst; tongue white, except at the edges and tip, which are red; appetite moderate; bowels confined, and the fæces of a light clay colour. Purgatives produce dark evacuations. For twelve months has been troubled with hæmorrhoids. Urine small in quantity, sometimes perfectly lucid, and at others red and muddy. On subjecting it to chemical analysis, not a particle of albumen could be detected. Has been recently troubled with palpitation of the heart, especially when ascending a hill, or walking up stairs. Pulse 80, small, and occasionally intermittent. Skin, hot, harsh, dry. Lower extremities œdematous, soft, white, tender, and pit on pressure. Abdomen large, but not tense; fluctuation very perceptible; occasional pain in the pubic region. But the most prominent symptom was a burning heat in the abdomen. Says that "the water feels as if it was boiling;" compares it to the sensation produced by serum from a blister. A great variety of medicines were administered; aperients, diuretics, tonics, local bleeding, and rubefacients were applied. On Aug. 9th she expired, after six hours' suffering from most excruciating pain in the abdomen, objecting to any medicinal aid.

Post-mortem examination, twenty-six hours after death.—Heart large and flabby; ossific patches in the ascending aorta. Omentum highly engorged with blood of a dark, dirty, grumous character. The whole of the portal veins filled to complete repletion. Liver of a pale colour; natural size. Spleen very large, of a dark colour; texture loose. Uterus large and firm. Ovaries healthy in size and appearance; right ovary contained four corpora lutea, left ovary three; they were of a very dark colour. Two gallons of fluid were contained in the abdomen. Kidneys healthy.

This case presents two interesting features; one, the almost intolerable sensation of a constant burning heat in the abdomen, a circumstance not explainable by physiology, as far as I am aware; the other, as corroborating to a certain degree the hypothetical notion of the ancients, that male children are evolved from the right ovarium, and females from the left. In this case it will be noticed that the woman had had four boys and three girls; had four corpora lutea in the right ovarium, and three in the left. The coincidence is curious.

I am, Gentlemen, yours, &c.,

WILLIAM GRIFFITH.

27, *Lower Belgrave-street,*
Belgrave-square,
Sept. 8, 1834.

Foreign Hospital Reports.

HÔTEL DIEU.

M. Dupuytren's Operation for the Cure of Artificial Anus.

The patient, J. S., an agricultural labourer, æt. 37, had suffered from strangulated hernia some years ago, at which time a portion of the bowel sphacelated, and occasioned the disease for which he entered the hospital. The opening was situated beneath the right abdominal ring, and the fæces were constantly seen exuding from it; the edges of the opening were red, irregular, and extremely sensitive. The two ends of the bowel were found to present an acute angle, leading into a funnel-shaped cavity formed by the remains of the hernial sac. M. Dupuytren explained to the class that his object was to destroy this projecting septum, after which the contents of the bowel would pass by the natural outlet. He accordingly proceeded to introduce into the opening an instrument which he had invented, and named *enterotome*. This instrument, which resembles a straight pair of forceps, was about seven inches long, with edges grooved and serrated so as to receive each other; it was passed into the opening, and made to grasp with its teeth the septum described: the blades were kept in their situation by means of a screw passed through the handle; they were introduced separately, and seemed to give very little uneasiness. The patient was placed upon low diet.

The instrument was tightened daily by means of the screw. On the third day after its introduction slight colicky pains were felt about the umbilicus, which were relieved by fomentations; the fæces continue to pass by the artificial opening On the sixth and seventh days the grasp of the instrument appeared much loosened; the abdomen was quite free from tenderness. On the eighth day after the operation the enterotome fell out of the wound, bringing with it the projecting fold which impeded the passage of the fæcal matter into the lower bowel; the artificial opening was then partially closed with adhesive plaster, and an enema administered, containing two ounces of castor oil; this brought away several hard pieces of fæcal matter. A small portion of fæcal matter continued to exude by the artificial opening till the tenth day after the operation, when a copious discharge took place by the natural passage, and all exudation from the opening in the abdomen ceased. The edges of the hole were then slightly pared with a knife, and brought together by means of adhesive plaster, after which the wound rapidly healed, and the patient was dismissed cured.

We have been thus minute in the description of this operation, because we believe it to be the readiest and best method of relieving the patient from this afflicting and disgusting disease, and also because we hope to see it generally adopted by British surgeons. M. Dupuytren has operated several times in this way, and always with success.

Hemeralopia—Partial Amaurosis—Ramollissement and Atrophy of the Optic Nerves.

Monestier, a mason, 48 years of age, was admitted into the Salle Saint Marthe, in the Hôtel Dieu, June 11th, 1833. For some months he has not been able to see except in the day time. He has some vision at sunrise, which increases or decreases, according as the day is clear or dull; weak at noon, much more so morning and evening, and totally lost during the night. He can distinguish the light of a candle, but he cannot discover surrounding objects with it. The disease commenced imperceptibly, and its progress has been slow and gradual. He has never suffered from headach or pain in the eyes; the pupils are generally dilated, but contract slightly on the sudden application of light; cornea clear.

He was treated by bleedings, emetics, and a seton in the neck, from which he derived some advantage, but on the 23rd erysipelas took place around the seton, severe symptoms came on, and he sunk on the 30th.

On examination of the body twenty-four hours after death, the membranes and humours of the eye were found to be perfectly healthy. The optic nerves were found to be the subject of disease from the corpora quadrigemina to their decussation, they were in a state of ramollissement and atrophy, which was much greater in the course from the decussation to the orbit, the softening being extreme, and attended with change of colour; in the orbit,

the nerves were simply atrophied. The ophthalmic of the fifth and the lenticular ganglion were quite sound.

HÔPITAL ST. LOUIS.

Esthiomonic Ulcers.

N—, a young girl, about 18 years old, pale, and scrofulous, and born of a phthisical mother, was admitted an in patient of the above hospital, under Professor Alibert, in the beginning of May. From infancy, she has been troubled with ophthalmia, attended with other symptoms of a scrofulous constitution. In the year 1825, a hard, red, and indolent tubercle formed on the right side of the nose, which was quickly followed by others occupying the whole of the ala of that side. Iodurettted preparations were employed at intervals, and in the year 1832 she was almost cured, when, in consequence of a violent mechanical irritation, the disease returned, and in less than a year the whole nose was affected. When she was admitted, the nose was found to be very much swelled, the skin covering it of a deep-red colour, shining, and as if thinner than usual. The tip of the nose was covered with a greenish, thick, and irregular scab; this having been removed by a poultice, an unequal corroded surface was found beneath, bathed with ichor, and furrowed with narrow and deep ulcerations between the ulcerated tubercles. The catamenia commenced only a year previous, and are very irregular.

She was placed forthwith on the antitrumous regimen (bitter infusion of hops, with an ounce of the wine of gentian every morning); and every five or six days the ulcers were cauterised with the fused nitrate of silver. This treatment has been employed three weeks, during which time the nose has not diminished in size, but the ulceration is arrested, and the tubercles are evidently flattened.

UNUNITED FRACTURE OF THE OS HUMERI HEALED SUCCESSFULLY BY STIMULATING INJECTIONS INTO THE WOUND.

In a case of the above description, Dr. Hulse, Surgeon to the Naval Hospital of Pensacola, states, that two months after the fracture no bony union was formed. He first thought of resorting to the seton with a stimulating fluid into the wound, which had become fistulous. He began with port wine and water, proceeded to salt and water, and eventually to a solution of sulphate of copper. In two months a firm union was established, and the patient was able to use the arm at driving nails. Small fragments of bone were afterwards discharged from the fistula. In cases where no fistula exists, Dr. Hulse proposes to insert an instrument till it comes in contact with the fractured extremities of the bone, and using a tube through which the injections can be thrown.—*American Journ. of Med. Sciences, February*, 1834.

We are further informed in the number for May, of the same Journal, that in the above case a perfect cure has been effected, so that the seaman has been able to return to his duty.

British Hospital Reports.

WESTMINSTER HOSPITAL.

Neuralgia of the Spine and Mammæ.

Elizabeth Pollard, ætatis 18, was admitted into Anne's Ward the 29th of July, 1834, under Mr. White, resides in Northumberland-street, in the New Road, of a clear complexion, pale, leuco-phlegmatic temperament, not married. She has generally enjoyed good health until the commencement of the present complaint, which dates about two years since, showing itself first in the form of great pain and irritability of the spinal column. As time passed, other parts of the body became similarly affected, more especially the left breast and the region of the spleen, whence the pain frequently darted down the arm, sometimes as far as the elbow, at others down to the wrist. Four months ago the left mamma became enlarged and exceedingly painful, so that she could not bear the slightest touch. It continued in that state for two months, and none of the remedial measures put in force seemed of any advantage. She has been cupped, leeched, and blistered without effect, and acupuncturation, which was had recourse to, proved unavailing.

The whole length of the spine is exceedingly irritable, so much so, that she cannot bear the slightest pressure on any part, nor can she lie on it; no apparent change in the osseous spine, the back being perfect; the left mamma is also larger than the other, and very painful; she is exceedingly nervous, subject to occasional palpitations of the heart when flurried; appetite capricious; is troubled with frightful dreams; pulse small, about 68. She is likewise subject to a curious paralytic affection, which will sometimes affect the left side for

a day or two, and then go off; at others, it will assume the form of paraplegia. She also complains of pain in the head, with dimness of sight, for which cold lotions have been applied with benefit.

She invariably replies to the first two or three questions respecting the uterine secretions that she is quite regular; but, by a little cross-examination, the following facts were elicited:—She menstruated first at the age of fourteen; the secretion is generally regular as to the time of its appearance, and most commonly lasts three or four days, but sometimes only two or three days, and at others is continued to the sixth; the quantity secreted is seldom the same, and it is always of a pale colour; it is sometimes attended with dysmenorrhœa. The disease is not increased, she says, when the period for the catamenia is approaching.

The oleum terebinthinæ, with the lytta, were at first given, but they produced severe strangury, and were consequently omitted. Mr. White then ordered shocks of electricity to be administered, which has not been done, in consequence of the instrument being out of order. In the meantime, the carbonate of potash was prescribed, which was afterwards changed for the ferri carbonas, of which she is now taking two drachms three times a-day. She has taken this medicine since the 23rd of August, and also used an acetate of morphia ointment to the breast, but without any improvement; indeed, she thinks she is rather worse than better.

Sept. 6th. She is in no respect improved. (Continue the ferri carb. 3 iss. ter in die.)

Mr. White, in drawing the attention of the pupils to the case to-day, remarked, that in neuralgic mammæ the patient very frequently could not bear the slightest touch, while great pressure could be borne without any indication of pain. He did not know any cause that he could assign for it, but supposed it depended on some peculiar condition of the cutaneous nerves; for he had seen cases of palsy, where pinching with forceps, and goading with pins, did not cause pain, and yet tickling the sole of the foot with the finger would cause immediate spasm of all the muscles of the limb.

The case is mentioned in this incomplete manner, with the view of drawing the attention of the students to this specimen of a very interesting class of disorders,—the neuralgia dependant on uterine disorders. Would not Dr. Loudon's plan of inducing a due uterine secretion by leeching the mamma occasionally be available?

Extraordinary Skin Disease.

[An account of this case has already appeared in the pages of this Journal, but so short and imperfect, that an additional notice may perhaps be deemed not superfluous.—Rep.]

A man, of the name of Lamberte, a native of Suffolk, 45 years of age, came to the hospital, Jan. 12, 1833, and again subsequently, in order to exhibit himself to the medical and surgical officers of the institution, and to the students attending, as a curiosity, by which proceeding he gains his living. He states that his great grandfather was a savage, caught in Davis' Straits; he was supposed to be an Esquimaux. This man was brought to England, where he married, and had children.

The disease of the skin which Lamberte exhibited, consists of a peculiar dark brown, horny, and scaly eruption, considerably raised above the cutis, covering the whole body, except the face, palms of the hands, and soles of the feet. It is thickest on the dorsal surface of the hands, and on the ankle-joints; the skin of various parts of the body, especially of the limbs, is very much wrinkled in consequence of this complaint. A very thick crust is formed on the extremities, but this deposition is very slightly elevated on the body; the parts of generation, and the superior edges of the ears are in the same condition; the voice is peculiarly hoarse.

This disease the man reports to be hereditary in the male descendants only; it commences with them about the age of two months, and it scales off every year, until the age of fifty, when it becomes permanent, and continues to thicken.

Lamberte has passed two and twenty years of his life on the continent, exhibiting himself to the various medical men of the towns he passed through, and laying their curiosity and zeal for science under contribution. He has been seen by Blumenbach, Cuvier, and Geoffroy St. Hilaire, and also by most of the medical men of London. Blumenbach and Cuvier have written an account of this man in their works; and the latter naturalist, in conjunction with Geoffroy St. Hilaire, made various experiments at the Jardin des Plantes, with the view of removing the complaint. They succeeded only partially; they were enabled to detach the horny substance sooner than usual, but could not prevent its return. About two years ago, he was an inmate of Guy's Hospital, when attempts were made to cure him, which proved unavailing. The man declares he would not part with his complaint for 100*l.* a year, as he finds it supports him very well, and he is much attached to a vagrant, lazy life. His father, however, was very desirous of getting rid of so unpleasant a companion, and was under medical care for a long while, but without reaping any advantage. This man is married, and has a daughter, whose skin is very clear; his brother has two sons, both of whom have the complaint. He is apparently a stout powerfully built man, about five feet nine inches high. He says he never had an hour's illness in his life. He expressed himself as perfectly willing to allow the whole or part of his skin to be preserved after his death.

WESTMINSTER DISPENSARY.

Salivation and Loss of a portion of the Soft Palate from a single application of Mercurial Ointment.

S. P., a fishmonger, æt. 72, of weak and infirm habit, applied mercurial ointment rather freely to the scrotum, for the purpose of destroying insects. On the morning he proceeded to his employment, which required him frequently to dabble in cold water; and towards night he complained of an uneasy sensation about the mouth and fauces, of general restlessness, loss of appetite, sense of anxiety about the præcordia, and hectic fever.

The patient was seen by Dr. Litchfield two days after the attack; the tongue, tonsils, and submaxillary glands, were enormously swollen, and the discharge of saliva from the mouth excessive. On examining the throat, an erythematous blush was found to pervade the soft palate and pharynx; at the back of the former was seen a defined ulcer, of the size of a shilling, surrounded by a dark band of inflammation; the bowels were constipated, and the pulse small and quick. The patient complained greatly of a burning sensation in his mouth and throat, and was directed to dissolve a piece of ice in the mouth at frequent intervals, to expose himself freely to a dry and cool air, and to take an aperient draught of salts and senna. He was also ordered to take the following powder in milk every six hours,

℞. Sulph. sublim. gr. x.;
Sodæ carb. gr. v.—M.

and to gargle his throat freely with a muriatic acid gargle as soon as the swelling had subsided. Under this treatment the unfavourable symptoms rapidly ceased, and the ulcerative process was arrested, but not until a considerable portion of the soft palate had sloughed away.

APOTHECARIES' HALL.

Names of those gentlemen to whom the Court of Examiners granted Certificates of Qualification, Thursday, Sept. 4th.

Henry Blenkinsop	Warwick.
Cornelius Harrison Brown	Canterbury.
Bellas Moses	Brampton, Cumb.
Robert Mostyn Rathill	Aberystwith.
John Morris Rogers	Stafford.
George Brereton Sharp	Maidencroft Hitchin, Herts.
James Clayton Williams	Ketley.

LITERARY INTELLIGENCE.

Preparing for publication, a new edition of Dr. Forbes' Translation of Laennec's work on Diseases of the Chest and Auscultation, with copious additional notes.

BOOKS FOR REVIEW.

A Series of Anatomical Plates in Lithography, with References and Physiological Comments, illustrating the Structures of the Different Parts of the Human Body. Edited by Jones Quain, M.D., Professor of Anatomy in the University of London. Fasciculus XVI. Taylor.

CORRESPONDENTS.

Tyro.—We recommend him to study both systems. The Apothecaries' Company, however, are satisfied if the students know only the "Artificial System" of Linnæus.

Mr. M., of Dublin.—We shall thank him for any communication.

Mr. Bainbridge.—His Essay on Fungus Hæmatodes, with wood-cut, shall appear next week.

METEOROLOGICAL JOURNAL.

MONTH. Sept., 1834.	Moon.	Thermom.			Barometer.		De Luc's Hygrometer.		Winds.		Atmospheric Variations.		
4		69	71	63	29·67	29·63	71	71	S.	S.E.	Fine	Fine	Fine
5		68	71	59	29·63	29·63	71	70	S.S.W.	S.S.W.	——	——	——
6		65	67	57	29·73	29·82	70	67	S.W.	W.	Cloudy	——	——
7		61	64	55	29·74	29·70	68	70	W.	S.S.W.	Fine	——	——
8		58	63	55	29.74	29·36	71	73	E.	S.	Rain	——	——
9		61	64	55	29·16	29·31	75	74	S.S.W.	S.W.	Cloudy	——	——
10	☽	60	63	53	29·53	29·47	74	72	S.	S.	Fine	——	Cloudy

Omitted last Journal.—The quantity of Rain fallen in August was 1 inch and $\frac{96}{100}$.

50, *High Holborn.* William Harris and Co.

All Communications and Books for Review to be forwarded (free of expense) to the Publisher, 356, Strand, near King's College.

THE

London Medical and Surgical Journal.

No. 138. SATURDAY, SEPTEMBER 20, 1834. Vol. VI.

LECTURES ON THE THEORY AND PRACTICE OF MEDICINE,

BY WILLIAM STOKES, M.D.,

Delivered at the Medical School, Park Street, Dublin.—Session 1833–34.

LECTURE XXXIII.

Sudden Paralysis from Abscess of the Brain—Demonstration of the Cellular Tissue of the Brain—Compressibility of the Brain—Pathological states—Arachnitis without Delirium—Case of Paralysis of the Portio Dura—Use of the Electro-puncturation—Mechanical support of Paralysed parts—Active and Passive Neuroses—General Pathology of—Principles of Diagnosis.

Gentlemen,—Before I leave the subject of organic affections of the brain, I wish to exhibit a few preparations illustrative of some of the principal diseases dwelt on in the preceding lectures. You will recollect that in a former lecture, I alluded particularly to the question, how far we are able to judge of the existence of apoplectic effusion by the *sudden* occurrence of an attack of paralysis. I endeavoured then to impress upon you, that we may have sudden paralysis from other causes, as well as apoplectic effusion, and stated that there were numerous cases of sudden paralysis, with disorganisation of the brain, on record, depending not on apoplectic effusion, but on circumscribed abscess of the brain, and that, consequently, the diagnosis of apoplectic effusion from *suddenness* of attack was only valuable when it came on unpreceded by symptoms of local disease of the brain. I alluded to a remarkable case of aneurism of the arteria innominata, in which the patient, soon after the date of his admission into the hospital, had become suddenly hemiplegic. This was a case in which one would be led to expect an effusion of blood into the brain, as the circulation of the head was evidently impeded by the pressure of the aneurismal tumour on the great veins, and as there was a remarkable distension of the jugular and other superficial veins. Of the existence of the aneurism there was not the slightest doubt; the tumour could be felt pulsating below and above the clavicle on the right side, compressing the trachea, so as to cause stridulous breathing, and producing a varicose state of the veins of the neck by its pressure. We accordingly made the diagnosis of aneurism of the arch of the abrta, or of the arteria innominata. In this case two circumstances, the sudden paralysis of one side, and the obstruction to the circulation of the neck and head, would, as I have said before, lead to the supposition of an apoplectic effusion. On dissection, however, the paralysis was found to depend, not on this circumstance, but on the existence of a circumscribed abscess in the anterior part of the opposite hemisphere of the brain. I have the pleasure of exhibiting to you to day this interesting and important preparation. It is too large to send round, but you can all inspect it after lecture. Here is the aorta from its commencement at the left ventricle, here is the enormous aneurism of the arteria innominata compressing the trachea, so that it has not only pushed it far to the left side, but has flattened it in such a manner as to produce a curious alteration in the appearance of its musculo-membranous structure. The terminations of the rings of the trachea are brought close together, and the muscular parts are folded in between them. There is another circumstance here deserving of your notice, the right carotid, you see, is obliterated; it is interesting to connect this fact with the absence of true apoplectic effusion. The case altogether is a curious one, and presents two remarkable circumstances, great mechanical obstruction to the venous circulation of the head, and sudden paralysis *without effusion*. It is, however, to be remarked, that in this case, though the paralysis was sudden and unexpected, it was preceded by some symptoms of local disease of the brain. The patient had pain in the head and limbs of one side, accompanied by a sense of formication. These symptoms were remarked some days before the attack of paralysis, but their importance was not, at that time, thoroughly estimated, in consequence of the greater share of attention being directed to the aneurismal disease.

In this bottle, you have a specimen of that

species of ramollissement which supervenes on local inflammation of the brain. We have every reason, I think, to believe that when this disease occurs in the young, or in the adult, it is the result of an active inflammatory process, and that softening of the brain has in it nothing more specific or peculiar than softening of the liver or lungs from acute inflammation. Here, you see, is the disease, an irregular cavity filled with broken up cerebral matter, somewhat resembling cream in appearance and consistence. I may remark here, that it is in cases of this description, that we are able to demonstrate the existence of the cellular membrane of the brain. This cellular membrane is extremely fine and delicate, so much so, indeed, that some anatomists of high authority have asserted that the brain possessed no interstitial cellular tissue. This preparation, however, gives a proof of the great light which pathology frequently throws on obscure points of anatomy and physiology, for though the insterstitial cellular tissue cannot be seen in the sound brain, we are able, in the preparation before us, to demonstrate its existence with certainty. It is, however, to be observed, that it is only in recent cases of ramollissement that this phenomenon can be examined with advantage, for in those of long standing, the cellular membrane shares in the general destruction more or less, and gives way. But if you get a case where the softening is recent, and then take the softened portion of the brain and expose it to the dropping of a filter, you will find that the soft cerebral matter will be gradually washed away, leaving behind it a delicate tissue, and in this way you can prove the existence of cellular membrane in the substance of the brain, like that of other parenchymatous organs.

Here, gentlemen, is a specimen of apoplectic effusion; see how extensively the substance of the brain has been torn; the cavity formed in this way is, you will perceive, filled up with a large clot. Now there is one consideration which strikes us at once, in looking at an effusion of this kind into the substance of the brain, whatever may be its situation or extent, and this is, *that the brain must be a very compressible organ.* Here we see the brain torn, a cavity of large size formed, and this completely filled with blood. Now it is obvious that the rest of the brain must give way, in order to give room for the formation of this cavity. If, then, it be true, that the brain is compressible, so far as to admit of the formation of a large cavity, it necessarily follows that, contrary to the opinion of Drs. Abercrombie and Clutterbuck, the quantity of blood in the brain may vary, and be at one time greater than another. These authors think that the quantity of blood circulating in the brain never varies, but here, you will perceive, we have a remarkable cavity; and it is plain that the rest of the brain must have yielded before it could be formed, and it follows, as a natural inference, that the brain must be compressible, and that, consequently, the quantity of blood contained may vary at different times. It may be argued against this, that the illustrative proof in this case is derived from a pathological condition, and that, under such circumstances, the brain has room for the formation of a cavity, by the emptying of some of its vessels. Here, it is urged, is a cavity, but the emptying of the vessels of the brain compensate for it, thus room is found, and there is no increase in the quantity of blood circulating in the brain. This, however, I look upon as a mere *petitio principii*, nor have we any reason to think, that, in a case of apoplectic effusion, there is any corresponding emptying of the vessels, for dissection almost always shows a surcharged state of all the vessels. The result, then, in my opinion, is, that the brain is compressible, and may admit a larger quantity of blood at one time than it does at another. On this subject I advise you to consult Dr. Mackintosh's work on the Practice of Physic, and also the review of Dr. Clutterbuck's Essay on Apoplexy in the London Cyclopædia of Practical Medicine, as given in the Dublin Medical Journal, Vol. II.

Here is another specimen. You see the brain, with a small clot in its substance about the size of a hazel nut. The patient in this case did not die suddenly; the clot has nearly lost the appearance of blood, and the processes of absorption were going on. I have got here another preparation, illustrative of this effect on one of those effusions. I told you, in a former lecture, that in these cases one of two things occurred; either the clot was wholly absorbed, and a serous cyst left in its place, or it was not absorbed, and became to a certain extent organised, and that this might be the history of many of the anomalous tumours we meet with in the brain. Here is a clot, fully as large as a walnut, in which no absorption has taken place, and you perceive it has been converted into a mass of a dense solid texture. You can easily conceive that the brain, having a clot of such a texture in its substance, could not easily recover its functions, and that the paralysis would be persistent. Here is another large apoplectic effusion, in which a certain degree of change has been produced; the clot you see has lost a good deal of its colour, and is not so red as in its recent state. Here is an excellent specimen of circumscribed abscess of the brain in the centre of one of the hemispheres. In this you can, to a certain degree, demonstrate the cellular membrane of the substance of the brain, but if the preparation had been manipulated in the way I have mentioned, I have no doubt but that it would exhibit it much better, that is, provided the abscess was of recent occurrence. If it should happen to be of long standing, the cellular membrane generally gives way, and you have nothing but a cavity filled with softened matter. This large preparation exhibits an enormous effusion on the surface of one of the hemispheres of the brain; it was the result of an injury of the

head, and was accompanied by paralysis of the opposite side. It furnishes an example of what has been termed traumatic apoplexy. The other preparations on the table do not apply so immediately to the illustration of apoplectic effusions, and I shall pass them over.

Here is a preparation which I would draw your attention to, as it belongs to a very remarkable case. I mentioned before, that in certain cases of arachnitis, where the disease was chiefly situated at the base of the brain, it had been observed that there was seldom delirium. In this case the patient complained of pain along the base of the skull, which occasionally remitted and then returned with violence, and it was at first supposed to be neuralgic. He continued in this state for some time, having a recurrence of violent pain in the ear, temporal and mastoid regions, which lasted for several days, when all of a sudden, without any preceding delirium, he became comatose, and died shortly afterwards. On dissection, the arachnoid covering of the brain was found to be in a state of extensive disease over the inferior surface of the anterior lobe and towards the posterior part of the base of the brain. Here we had a case of extensive and fatal arachnitis with total absence of delirium.

When speaking of the employment of galvano-puncturation in the local treatment of paralytic affections, I stated that the case in which the most decided benefit was observed, occurred in paralysis of one side of the face, apparently unconnected with actual disease of the brain, and of a local nature. This is in accordance with what has been observed with respect to the efficacy of all local measures employed in the treatment of paralysis, and accordingly the more the affection is purely of the nerves of the part, the more satisfactory should be the results of galvanism. I shall read for you the notes of this case, and I am happy to have in my power, to lay before you two excellent drawings of the patient's appearance before and after the use of the galvanic battery, from the pencil of my friend, Mr. Berthon.

"A bricklayer, named T. Hogan, got an attack of erysipelas of one side of the face, accompanied by a feeling of pain and stiffness between the angle of the jaw and mastoid process of the right side. This was followed by an attack of paralysis of the right side of the face, and he presented himself for admission at the Meath Hospital in the following state. The features at the right side of the face are blank, unmeaning, and motionless, while those of the left side retain their natural cast, except that their lines are more strongly marked, and the angle of the mouth is drawn upwards and towards the left side to a considerable extent. The skin of the right side of the forehead is smooth, that of the left furrowed and puckered. The lids of the right eye are half closed, and he has not the power of moving the upper one. When desired to close his eyelids, the eyeball rolls upwards, and the transparent cornea is carried behind the curtain of the upper lid. By this movement the patient excluded all objects, and was under the impression that he had shut his eye. The lower lid hangs down, and is partly everted, exposing the conjunctiva, and allowing the tears to trickle down the cheek. When he breathes, the right cheek is puffed out; it becomes still more distended by an attempt at blowing; and, when attempting to drink, a quantity of the fluid escapes at the right angle of the mouth. On being requested to draw the right angle of the mouth towards the corresponding ear, not the slightest movement was made, except by the muscles of the opposite side. In masticating his food, the morsel gets between the cheek and gum of the right side, and he is obliged to put in his finger to dislodge it. Sensation on the paralysed side is unimpaired, and there is no deafness, alteration of taste, or loss of vision. With respect to the muscular functions of the tongue, they appear to have suffered no injury, and he can direct it with facility to either side. Here was a fact to show that the paralysis of the face in this instance had no connexion with cerebral disease. In the majority of cases of paralysis of one side of the face from disease of the brain, there is lesion of motion of the tongue, but here it was in its natural condition. There is a slight degree of thickness of speech, which can be remedied by supporting the paralysed cheek with the palm of his hand. He complains of a feeling of stiffness in the jaws, and cannot open his mouth more than what would be capable of admitting a teaspoon. He has had some tenderness over the mastoid process. He can press hard substances with his teeth, and the temporal, pterygoid, and masseter muscles seem to be as strong on the paralysed as they are on the sound side. He can move the lower jaw so as to incline the symphysis to either side, but more to the left than to the right. His general health is good and his bowels regular." I shall hand round the drawings of this case for your inspection. You will observe the peculiar appearance of the left side of the face, with the mouth drawn upwards and the skin of the nose and forehead thrown into deep wrinkles. There can be no doubt that the exciting cause of the paralysis in this instance was connected with the erysipelas of the face. He had no symptoms of any cerebral affection, and the paralysis was limited to those muscles which are supplied by the seventh pair of nerves. The tongue was quite unimpaired in its motions, and there was no lesion of taste, hearing, or smell. It was, in fact, a case of purely local paralysis, and bore a decided analogy to those cases which have been so accurately described by Sir Charles Bell as depending on an affection of the seventh pair of nerves.

The treatment of this case was in accordance with the views already detailed; the

diagnosis was paralysis of the seventh nerve, and the treatment founded on this diagnosis proved eminently successful. The first thing done was to apply a few leeches to the ramus of the jaw; we then used stimulating applications, and he used for some time the liniment. camphoræ compos. with extract of belladonna. After this, he was put on strychnine, which did him some good; but there was so great a susceptibility of its action, that we were ultimately obliged to give it up. The last remedy employed was electro-puncturation, under the use of which he improved rapidly. On the 5th of March the galvanic battery was first applied; the needles at that time were inserted, one in front of the ear, and the other near the symphysis of the chin; subsequently, they were inserted in various parts of the right side of the face, following the different branches of the portio dura. On the first application of the galvanic influence, he had spasmodic twitches of the paralysed muscles, and soon afterwards he began to complain of a burning sensation in the cheek and pain in the head. Here, it would appear, that headach was the result of the proximity of the stimulus to the brain. On the 11th, the symptoms were nearly the same, and his general health continued to improve. On the 15th, the application of the galvanic influence was followed by severe headach, which lasted for half an hour. On the 19th, his appearance was much improved, and the galvanic battery was not used. On the 20th it was again applied, and in an hour afterwards he had rigors and slight headach. On the 21st, after using the battery, he had rigors again, followed by headach and a pricking sensation in the cheek. On the 24th, he left the hospital in a remarkably improved state. Expression had returned to the side of the face which had been previously unmeaning and blank; the furrows which had deformed the opposite side were removed, the thickness of speech diminished, and the paralysis of the buccinator had been so far relieved, that he was able to manage soft articles of food, without being under the necessity of removing them from between the cheek and gum with his finger. In this case we employed an adjuvant which should be mentioned: we supported the paralysed parts for some days with strips of adhesive plaister, to restore the position of the mouth. This was done on the principle recommended by Dr. Pemberton, in the treatment of paralysis of the fore-arm and hand from painters' colic. By applying strips of plaister near the angle of the mouth, and drawing them back and fixing them behind the ear, we endeavoured to counteract the preponderating antagonism of the muscles of the opposite side. For the report of this case, I am indebted to Mr. K. Ellison, of Liverpool, who had the charge of the patient in the Meath Hospital, a gentleman whose talents are only equalled by his untiring zeal in the study of pathological medicine.

The foregoing case is interesting in two points of view; first, as to its peculiar phenomena, and, in the next place, as to the success of local treatment. It also shows that we may go too far with electro puncturation, particularly when it is applied to parts which are situated close to the brain. You recollect that, in Mr. Hamilton's case of amaurosis, three pairs of plates were capable of producing a degree of stunning and insensibility which lasted for some time. In this case the rigors and headach showed that the galvanic fluid had a powerful effect, and would lead us to be cautious in using it too freely, where the parts to which it is to be applied are situated in the vicinity of the brain.

We have now, gentlemen, taken a very brief sketch of some of the most important organic affections of the brain; but in the study of disease we constantly meet with a vast number of cases presenting the most extraordinary nervous phenomena, and yet we are unable to discover by the closest pathological investigation any appreciable lesion of the nerves, spinal cord, or brain. These are the class of diseases which have received the name of *neuroses*. We find in most of these affections a remarkable alteration in the nervous functions without any perceptible or constant organic change; we find too that this alteration may be connected with an exaltation or a depression of the nervous power; and from this circumstance results the division of neurotic affections into active and passive,—active where the nervous power is elevated, and passive where it is depressed. The spasms which accompany an attack of flatulent colic, the exquisite pain of tic douloureux, and the wild intellectual exaltation of mania, are examples of active neuroses. A patient in the second stage of painters' colic will have paralysis of motion and sensation of the fore-arm; there is here an obliteration, or, at least, a diminution, of the nervous function, and the disease furnishes us with an example of passive neurosis.

Of these two classes the active are certainly the most interesting in many points of view. We find under the class of active neuroses some of the most extraordinary diseases to which the human body is subject; all the different varieties of spasmodic affections, chorea, epilepsy, tetanus, hydrophobia, tic douloureux, hysteria, and a host of others come under this denomination. It is a melancholy reflection then, that, in the present state of medical science, we are not only ignorant of the ultimate cause of most of these diseases, but even of the causes of the variation in their phenomena.

You will recollect, that, in a former lecture, I threw out a conjecture on this point, and stated, that there might be changes of an organic nature connected with these affections, not appreciable by any mode of investigation at present known, and that it was possible that there might be a change in the nervous

substance, quite independent of any addition or subtraction from the component sum of their organic molecules, but in all probability connected with a new and different arrangement of these molecules. The analogy in this instance is drawn from chemistry, and, I think, may obtain here, as well as in the phenomena of Isomerism in inorganic bodies. You are aware, that many bodies, which seem to present exactly the same component elements, are found to be extremely different in their properties, and that this difference has been accounted for by supposing that it depends, not on any addition or subtraction of the component molecules, but on *some difference in their mode of arrangement.* Now if this happens in the case of inorganic bodies, there is no reason why it might not also occur in organic substances; and, if so, we may understand why a state of the brain and nerves, which appears to us to be normal and healthy, may still be essentially different, and give rise to the most extraordinary phenomena.

I shall not detain you with any further remarks on this subject, it is too obscure to be treated of in a course of lectures on the practice of medicine; let us turn to the consideration of the actual state of our knowledge on the subject of nervous affections. In the first place, we know that in the neuroses there is no change discoverable which could account for the symptoms; and that if we examine the nervous centres to explain the phenomena of paralysis in one instance, of epilepsy in another, of mania in a third, of hydrophobia in a fourth, and so on, the most minute investigations will not, in the majority of cases, point out any deviation from the healthy condition sufficient to account for the phenomena. We find, too, not only that the state of the brain does not present any constant difference in the foregoing diseases, but also that there is often not the slightest trace of anything like inflammatory action, a fact borne out by the most extensive experience, and showing that treatment which would relieve ordinary cases of inflammation of the brain will here prove useless. There is one curious circumstance connected with these neuroses which you should be aware of, and this is,—where the patient, after suffering from a nervous affection for a long time, dies, you may find organic disease on dissection; but here there appears reason to believe that organic changes of the cerebro-spinal centres, taken in the proper acceptation of the term, *are, in reality, the result of some state of these centres which existed previous to the attack, and was the cause of all the nervous phenomena.* We arrive at this conclusion for two reasons; first, because such changes are by no means constant; and, secondly, because they are only found where disease has been a long time in existence.

Nervous phenomena, independent of organic lesion, have been divided into two classes, namely, neuroses of the nerves of animal, and neuroses of the nerves of organic, life. With respect to animal life, or the life of relation, we may have its neurotic affections of an active or passive kind; we may have pains, spasms, and exaltation of intellect, under the active form; under the passive, we may have extinction of muscular motion, sense, and the intellectual functions, the life of the individual being still preserved. With respect to the system of organic life, it would appear that, if we are to speak in general terms, we must admit that there is no passive paralysis of the nerves of organic life, they being liable to the active neuroses alone, for a passive neurosis of the ganglionic system implies death; yet, to a *certain degree,* as I have formerly stated, such a passive neurosis might exist in the visceral nerves. But we may have the phenomena of the active neuroses in all parts of the body, whether muscular or visceral. It is a singular fact, that in some visceral diseases we have signs of high exaltation of the nervous functions of the parts, in others not. Why is this the case? I think it must chiefly depend on the mode or degree of excitability of the brain, which is very different in different persons. There is no known organic difference between the gastritis with delirium, and the gastritis of a man in his senses; nor is there any difference between the hepatitis of a man of bilious, and the hepatitis of a man of nervous, temperament; and we have, in order to explain the variety of the symptoms, to refer to some original conformation or mode of excitability of the sentient centre. Whether this difference depends on an original organisation, or on excess or deficiency of parts, or on phenomena similar to those of Isomerism, we know not. As the result of experience we are forced to admit, that these phenomena have no necessary connection with the inflammation of the suffering part, or of the brain, and this proposition applies to the great majority of cases which are called nervous. Experience has also proved the truth of this from the results of treatment, for it has proved that the most successful treatment is that which is by no means calculated to remove inflammation (in its ordinary acceptation) either from the brain or from the suffering parts. The progress and duration of these cases, also, tend to prove the same thing; for if we were to measure the degree of inflammation by the amount of pain suffered, it would be of an intense character and rapid fatality, and yet we find that, notwithstanding the violence of the symptoms, these diseases may go on for a number of years.

It is quite plain, then, that the pathological condition of a neurosis is not inflammation. Now, one of the most common mistakes in the practice of medicine is the taking these neuroses for cases of local inflammation, and this, I need not tell you, is frequently productive of most distressing consequences. There is one point connected with those violent nervous attacks which leads to a persistence in this error, and this is, that local antiphlogistic treatment gives temporary relief, although, in

the majority of instances, this is of very brief duration, and the pain and other symptoms return, leaving the patient worse than he was before. From the fact of temporary alleviation following depleting means, however, the idea of inflammation gets into the practitioner's mind, and the patient himself is favourably disposed to that plan of treatment from which he has obtained a momentary relief. The consequence is, that a system of general and local depletion is continued, until a period arrives when the nervous excitability gets to an alarming height. Now, is there any circumstance or class of circumstances which would lead to the diagnosis of these affections? I feel certain that in many instances this must be a matter of some difficulty. By a careful study of the symptoms, however, you will, in most cases, be able to arrive at the truth. The first thing to which I would direct your attention in studying the diagnosis of such cases, is, *the extreme violence of the pain.* Now, this intensity of suffering seldom occurs in cases of inflammation; and it is a curious fact, that the most painful diseases are the non-inflammatory. The agonies of a patient labouring under neuralgia of the liver, or of the left side, or under tic douloureux, are dreadful; the pain is far more intense than in any case of inflammation; and yet, notwithstanding all this excess and persistence of suffering, we do not see that the duration of life is necessarily curtailed. In the next place, you will observe that these attacks frequently recur, and that, though long continued and violent, they do not affect the patient's life, which would not be the case if they were connected with inflammatory action. If you add to all these circumstances a knowledge of the constitution, temperament, and habits of the patient, you will have still clearer notions. But there are other circumstances besides these to guide you. In the majority of cases you will find that all the local and general signs of inflammation, with the exception of pain, are absent. A female, labouring under neuralgia of the liver, will have frightful pains in the right hypochondrium, and yet, if you examine her, you find that she has little or no hepatic derangement, no tumour in the region of the liver, no derangement of the digestive system, and (though the disease has lasted for years) no dropsy, and, in many cases, no appearance of jaundice. She has no fever, thirst, or loss of appetite; her tongue is clean, her complexion clear, her stools natural, and her pulse soft. All these circumstances tend to show that, however violent the pain may be, it has no connexion with inflammation. You will be assisted further in your diagnosis, by finding that the access and cessation of these attacks are equally sudden and unexpected,—two characters which do not belong to organic disease. The quick supervention and sudden cessation of these diseases should lead you to suspect that they were not inflammatory. It may happen, in cases of inflammation, that pain may come on suddenly and as rapidly cease; but though it may come and go in a brief space of time, still you will find that lesion of function or structure remains. Thus, in a case of pleuro-pneumonia, the pain of the side may cease suddenly under treatment; but the stethoscope informs you that the layers of the pleura do not as yet glide freely on each other, and that there is some obstruction still to the free passage of air into the air vesicles. There is also another point:—When we come to inquire into the exciting causes of these neuroses, we observe that they are most generally found to depend upon various circumstances connected with improper nutrition and with moral influences. Of these two classes of causes the latter, though perhaps not the most numerous, are by far the most remarkable. A violent neurosis may be brought on in a single instant by moral causes. A nervous female, in apparent good health, may, from a sudden fright or fit of passion, get an instantaneous attack of neuralgia of the liver, and be thrown into a state of intolerable agony. Lastly; you will be greatly assisted in these cases by a knowledge of their history and *previous treatment.* What you will generally find is, that the patient has gone through a long and harassing course of general and local antiphlogistic treatment. The failure of this treatment will be of great value in guiding you to a correct diagnosis; and you will be further confirmed in this view of the case, by finding that the treatment which has the power of relieving or curing consists in improving the state of the whole system by the use of tonic, and, in many cases, of stimulant, remedies. These observations will apply to almost all cases of purely nervous affections.

CLINICAL LECTURES ON SURGERY,

DELIVERED AT

THE HOTEL DIEU, PARIS,

BY BARON DUPUYTREN,

PRINCIPAL SURGEON OF THAT HOSPITAL.

Corrected by himself.

First impression of a Projectile—Its untoward Effects—Hæmorrhage from Large Arteries—Rareness of Primitive Hæmorrhage—Danger of Consecutive Hæmorrhage—Treatment of—Arterial Venous Aneurism—Tetanus—Symptoms of—Strangulation from Gun-shot Wounds—Effects of Heat and Cold—Influence of Morals on Wounds of the Head—Erysipelas—Death from—Post Mortem Appearances—Commotion—Contusion—Inflammation of the Brain, &c.

Gentlemen,—When a ball lodges in the centre of living parts, the first impression which is conveyed to the wounded is not that of pain, but a species of sudden numbness, accompanied with a sensation of weight in the wounded part, with a kind of commotion, similar to

that produced by a blow from a stick. A great many even at first do not know that they are wounded until they perceive a discharge of blood from the wound. Again, many, especially in cases of very extensive wounds, caused by large bullets, or where the large articular cavities are much disorganised, are so much affected by this kind of *deadness*, which is not only confined to the wound, that they are totally unconscious of every thing, fall into a state of apathy, and lose all sensibility. Such was the case with one of the King's guards, quoted by Quesnay; his state of stupor was so great, that when amputation of his leg, which had been extensively fractured by a bullet, was proposed to him as the only chance of saving his life, he replied *it was of no consequence to him.* Operations, or incisions, of the greatest severity in these cases, produce not the least sign of pain. The skin becomes pale and cold, sometimes it takes a yellow, or leaden hue; horripilations, prostration, and fits of syncope supervene; the pulse becomes small, irregular, and frequently intermitting; respiration is slow; mouth open; eyes fixed; and the countenance sunk. This death-like appearance, if not dissipated in a few hours, may generally be considered, to have an unfortunate termination.

But if re-action takes place the patient loses this general state of stupor; the wound, which before was pale, or of a livid hue, inflames, exhales a sanguinolent and fœtid liquid, and soon partakes of an emphysematous tumefaction, which extends to a greater or less extent, and at length reaches the trunk. It is accompanied with a disordinate fever, intermingled with shiverings and heat, attended also with mild but sometimes furious delirium, with vomiting, jaundice, and suppression of urine. In such cases the patients soon fall into a state of fever of the most malignant form, from which death speedily terminates their sufferings.

The part wounded, as well as the surrounding integuments and deep tissues, soon pass into a livid cold state, and a gangrenous odour and putrefaction rapidly supervene. The cadaveric lividity invades speedily the whole frame, which is in a complete state of putrefaction, at an epoch at which the bodies of individuals, who have died from other diseases, present not the least trace of decay.

It is generally believed, that this affection arises from a concussion produced on the nervous system, and some have endeavoured thus to compare this state of stupor with cerebral commotion, of which it would be thus speaking only a shade,—a degree, but it is not so; for in the same manner as commotion possesses its proper characters, so stupor also partakes of its own. In the first there is lesion of an organic function; in the second there is a shock affecting even the principle of life. We can observe only in the latter a state analogous to that produced from the influence of acute visceral inflammation, from typhus fever, from an invasion of gangrene, from an extensive burn, and perhaps, in general, from all very deep and extensive lesions. This proves how much this stupor, arising from a shock to the nervous centre, is independent of all mechanical concussion, as in individuals, who have received the same wounds under similar circumstances, it may or may not exist, and it appears much more frequently in relation with the moral state of the wounded than with the circumstances of the wound. Also in subjects gifted with the least moral energy the progress of accidents is similarly observed; for example, in the army young soldiers are particularly affected.

Gun-shot wounds generally *bleed* less than ordinary contused wounds. When even an artery of large calibre has been opened, hæmorrhage is not always the consequence. Its walls, partaking of the contusion, or disorganisation of the surrounding tissues, form torn flaps, or eschars, which obstruct and obliterate the calibre; moreover, if the vascular tube is cut throughout its circumference, it contracts as in lacerated wounds. A limb may be broken, or even carried off close to the trunk, without much consecutive hæmorrhage, and sometimes the vessels are obliterated to such an extent, that amputation may be effected without tying a single artery. But circumstances, which are opposed to hæmorrhage, in arteries of small or middle diameter, are incapable of resisting the impulsion of blood when of the largest calibre. A young man, who, at the attack on the Hôtel de Ville, in 1830, received a ball, which traversed the internal and superior part of the right thigh, and opened the femoral artery, lost such a large quantity of blood, as they brought him to the Hôtel Dieu, that when he arrived he was in a dying state. The artery was immediately compressed against the horizontal ramus of the pubis, an incision was made above the wound, and a ligature passed around the artery. This was done in two minutes from the time of his admission, and the hæmorrhage was checked, but the man fell into a complete state of syncope, every thing was done to produce re-action, but in this condition he expired. After what I have just said on primitive hæmorrhages, it is right to state, that Baron Larrey, by forming itinerant hospitals on the field of battle, made rapid steps in military surgery, as well as rendered speedy aid to the wounded.

Unless a large vessel is lacerated by a projectile, primitive hæmorrhage is exceedingly rare in these kind of wounds, but the accident the most frequently to be dreaded is *consecutive hæmorrhage.* This serious symptom takes place under two different circumstances, either the artery may have been divided in totality, or in part only of its circumference. In the first case, the eschar, as I have before alluded to, suddenly produced by the projectile, and the clot of blood which is found in the cavity, obliterate and suspend the circulation. But

it frequently happens, from the influence of some cause, that violent re-action ensues, the eschar is overcome, the clot driven away, and hæmorrhage is the result. It is in such circumstances as these, that the itinerant hospitals, founded by Baron Larrey, are of the greatest utility. In other cases the hæmorrhage remains checked till the contused and lacerated parts fall away by suppuration; and at this period, if the obliteration of the artery is only of short extent, if its adherence is not solid, if its union is destroyed by imprudent movements of the patient, &c., the artery becomes quite open, and the patient is in the most imminent danger.

Most commonly it is from the tenth, fifteenth, and even sometimes so long as the twentieth day, that these consecutive hæmorrhages supervene without any precursory symptoms, with the exception sometimes of a slight sanguineous discharge from the wound. Consequently a strict attention should be paid, at the time these after bleedings are expected, so as to be ready to check them by proper treatment. You ought always to bear in mind, that secondary hæmorrhages are much more serious than primitive hæmorrhages, either from the debility that is already induced by the disease and its treatment, or in consequence of the local state in which the inflammation has placed the arteries and their surrounding tissues.

Indeed, primitive hæmorrhage, which arises from the surface, may easily be checked, as the artery can easily be distinguished and tied; the extensibility of healthy cellular tissue permits a sufficient locomotion to draw the artery outwards; the cellular tissue and walls of the artery not having as yet undergone alteration, the ligature is not detached till the fifth, sixth, or eighth day, at which epoch the clot is organised, and there is no danger of a recurrence of the hæmorrhage. It is not thus in consecutive hæmorrhages; the tissues are retracted, and, as it were, condensed, and there is some trouble in discovering the vessel, which, from inflammation, has lost all natural extensibility; the ligature consequently easily divides it, and falls away before the obliteration has gained a sufficient power of resistance, so that hæmorrhage frequently supervenes in one or two hours after the operation.

The only method of treating these kinds of wounds, is to tie the trunk of the artery, at a greater or less distance from the injury. About ten years since, in a case of amputation, we adopted this plan on a patient at this hospital. Many consecutive hæmorrhages supervened; the artery was situated a great depth from the surface, and a ligature on its extremity was impracticable. The femoral artery was in consequence tied, and the patient got perfectly well. On the same principle, in 1814, we frequently tied the carotid for wounds of the branches of this vessel. In one case the hæmorrhage returned from one of the superior branches. The communications that exist between the two external carotids, are so large and numerous, that a ligature around the primitive carotid, which is less difficult to perform, is not followed by more danger.

Consecutive hæmorrhage supervenes from small arteries, as well as from those of larger calibre. In 1830, we received into the wards of this hospital, an officer, who was the subject of this accident, in consequence of a wound of one of the branches of the temporal artery; compression was made three or four times, with the effect only of suspending the hæmorrhage. By imitating Ambroise Paré, who, in a similar case, placed a ligature around the trunk of the artery, we managed to check the bleeding. Many others were received at the time in this hospital, who had received balls in their necks, and what surprised us more than any thing else was, that the projectiles should have passed through the midst of parts in which there existed so many arteries, veins, and nerves, without wounding either one or the other. One of the patients, a young man 20 years of age, who was in high spirits because he had arrived at the twelfth day without any serious symptom supervening from the wound, walked about, ate, and joked with every body around him, not thinking that imprudence of this nature would cost him his life. In one of his accessions of gaiety, suddenly, such a profuse hæmorrhage supervened, that it was useless to endeavour to check it, and in the course of a few hours he died.

It occasionally happens that an artery and its accompanying vein are divided together, and at contiguous points of their circumference. A communication is then established between the openings of these two orders of vessels, and the blood passes directly from the artery to the vein. A *varicose*, or an *arterial venous aneurism*, is then formed. An example of this kind was observed in the nephew of M. Ternaux, who received the contents of a gun in his shoulder. In another case, a similar cause produced the same result in the subclavian artery and vein. A charge of shot may produce the same accident, if close, or at no great distance from the wounded. Not many years ago, I was called by M. Husson to see an auctioneer, who had his stomach, thighs, and genital organs, perforated by small shot. For a month or five weeks afterwards, nothing remarkable was observed. But at the expiration of this time, our patient stated that he heard a whistling in his thigh; on applying the ear to the part, a sound exactly analogous to that made by the passage of blood from an artery, could be heard, and, by the application of a stethoscope, the whistling was still more evident. If compression was practised above the part, this noise ceased, but, on the contrary, if pressure was made below, the sound became more audible. The patient since has always enjoyed good health, but he is constantly obliged to wear a compress above the seat of disease. Nerves divided in these kind of wounds, partake of disorganisation like other tissues. It is, doubtless, to this cause

that we may attribute the slight pain usually felt, and the sensation of weight and numbness, so justly compared by Ambroise Paré to the fall of a large log of wood on the part, or to a severe blow from a stick, which, in a former lecture, I have previously alluded to.

One of the complications the most to be dreaded, and the most melancholy, is *tetanus*, to the principal characters of which I will here call your attention. All wounds, without distinction may give rise to this malady, but those made by pointed, lacerating, or contusing arms, .&c., and are complicated with the presence of a foreign body in the fibrous tissues, those particularly which affect the nerves, without completely destroying them, more frequently produce than any others this distressing affection. There is not the least doubt, but the moral dispositions of the wounded influence, also, in a great measure, its development; an exaltation of their sentiments, vivid or deep emotions, felt before or after the wound is inflicted, facilitate, also, its production. I believe, likewise, that hot and irritating diet, the presence of worms in the intestinal canal, &c., should be considered, frequently, as causes of tetanus. But these are only predisposing and additional causes; the most active and determining causes are the succession of a cold to a hot temperature. This impression is much more marked, as the temperature from heat to cold is more sudden, and when there is much difference between the temperatures. The influence of this cause is much more pronounced in wounds that produce abundant suppuration, and in those bodies from which there is exhaled much transpiration. Also in hot countries, in the Windward Islands, for example, where there is such extensive variation of temperature between the night and the day, the ravages of this disease are frequent, and carry off every year a number of negroes. This influence is remarked, also, on the field of battle, in the bivouac, when, after being exposed to the heat of the day, the wounded remain in the cold air of the night, or exposed to the north, or north-east wind, especially if it is cold and damp at the same time. It is observed, also, in the wards of military and civil hospitals, when there is a current of cold air directed on the beds of the wounded, produced from a bad system of airing the wards. It is scarcely ever observed to develope itself in a uniform state of atmosphere, whether cold, hot, or of middling temperature. But this is not the only physical cause of tetanus; it may be produced by a sudden, acute, importune noise. A sudden call to arms, the report of a gun, particularly a cannon, the sound of clocks during the night, have occasioned a concussion more than once, which has determined its invasion.

This disease consists in a permanent, painful, involuntary contraction, alternatively stronger and more feeble, which constitute exacerbations and remissions, principally characterised by sudden catchings and relaxations more or less marked in the affected muscles. It is almost always preceded by impatience, horripilations, sudden jerking movements, spasms, passing from one place to another. It does not affect at once simultaneously every part of the body, but attacks a portion of the muscles first, and extends afterwards to the whole of them. It commences either in the wounded limb or at another part of the body at a distance from the injury. In the first instance it is announced by a sensation of stiffness, which soon increases, and renders difficult the movements of this part. To this rigidity is added, at a little later period, contractions, painful jerkings, and the disease gradually extends to the entire muscular system. In the second, which is much more frequently the case, the muscles of the pharynx are first affected, from which more or less violent dysphagia is the result. The elevators of the inferior maxillary bone are those next affected, and we have constriction of the jaw, or trismus, &c. Tetanus after cicatrisation of the wound is rare, nevertheless we have seen many examples of it.

Strangulation is one of the most frequent complications of wounds, especially in those produced by sharp instruments. We conceive that the degree of strangulation would be in proportion to the increase of the volume of the parts, that is to say, to the intensity of the inflammation, which is the cause of the augmentation, and the symptoms are much more to be dreaded in those parts which are gifted with such organisation, as to cause the inflammation to be more rapid in its progress, than in those, in which there is more resistance of the surrounding parts. There is no organic tissue more liable to give rise to it, and to carry it to its greatest extent, than the alternative super-position of fibrous, resistant, inextensible tissue, and none more susceptible of increase of volume from inflammation than cellular and vascular tissue. These are parts particularly to be observed in the composition of the limbs, both from the shoulder to the fingers, and from the hip to the toes. Two different parts suffer then from strangulation, the tissues inflamed by compression, and the neighbouring tissues by distension. If the compression and distension are carried very far, the one or the other becomes gangrenous in consequence of obstruction to the circulation and to innervation, obstacles resulting from the compression exercised on the vessels and nerves.

This gangrenous termination is indicated by the cessation of pain, remission of fever, appearance of phlyctenæ, containing a violet and fœtid serosity, insensibility of the parts, coldness, and prostration of strength, &c. Sometimes, however, and then even we meet with many of these symptoms, the mortification is only apparent, there is only suspension of life, and a kind of local and momentary asphyxia. In these cases the circulation and innervation

must be rendered free, so as to permit the parts to retake up their vital functions, and which is frequently obtained by making free incisions into the strangulated part.

Inflammation which accompanies strangulation does not happily always terminate thus in gangrene. Sometimes, though rarely, it terminates by resolution, more frequently, however, by suppuration, but yet more constantly by induration. The second mode of termination is indicated by pulsations in the tumour, by the remission of pain, and local and general fever. But this remission is only of short duration, the pus, which soon collects together, renews the strangulation, and the symptoms may become as urgent as they were at first. As to the induration, it constantly leaves a hard and more or less painful engorgement, which, either in consequence of its nature, or from the particular tissues affected, it frequently runs on, to what is commonly termed a white swelling.

But when the patient has escaped the number of symptoms I have enumerated, there still remains many dangers to which he must submit. We have already seen what difficulty there is in the extremities of fractured bones to unite, what are the opposed causes to this unition, how fistulous openings and deep seated abscesses are formed, in consequence of which the periosteum and bones themselves are denuded and succeeded by necroses. This is not all; fractures, in which there abounds much spongy tissue, present phenomena which are not observed in those of compact tissue. These phenomena are owing to inflammation of the cellulo-vascular tissue, which lines the areola of this tissue, and of a number of veins which traverse it. This inflammation, always followed by necrosis of the bone, extends sometimes a great distance, and is much more certain to arise in wounds inflicted by fire-arms, than in injuries produced by other bodies, which communicate always a considerable shock, and frequently fracture the bone. We should always consider lesions of that part of the bone which contains so much spongy tissue as serious, though primitively the injury may appear but slight.

The large articulations possess all conditions of structure, which give to wounds inflicted by fire-arms a degree of intensity which we find in no other part of the body. Those of the wrist, ankle, and tarsus, are surrounded by numerous tendons and synovial sheaths; that of the knee is remarkable for its extent of bone, the complicated course of the synovial membrane, the ligamentous strength of its means of union; the shoulder and hip are surrounded by thick and numerous muscles. We must expect, then, when the exterior and soft parts are considerable injured, to find the articulating extremities of bones broken into numerous fragments, the ligaments and synovial membranes torn and lacerated to a great extent.

Such then, gentlemen, are the different degrees, complications, consecutive accidents, and principal causes of wounds inflicted by fire-arms, inherent causes, even from their nature and from their principal characters. But there moreover exists other causes, though foreign to the nature of wounds, that have nevertheless a very great influence over their progress and issue, such as temperature, diet, the moral situation of the wounded, and moral accidental impressions.

Intense heat, is it, as is generally believed, injurious to wounds, and particularly to gun-shot wounds? The opinion generally entertained is, that it favours the development of gangrene; that under its influence fever becomes more urgent, the patient becomes exhausted, and speedily perishes. Experience, however, has shown that these ideas are incorrect; and all military surgeons are now aware that these kinds of wounds are much more speedily cured in summer than in winter, in warm countries than in cold, and in a room where the atmosphere is confined sooner than in the open air. The campaigns in Egypt and Moscow presented an enormous difference; and every campaign made in the empire, in different climates of Europe, and in all seasons of the year, cannot leave the least doubt on this point. Cold causes inflammation of the wound, prevents cicatrisation, causes the edges to become red, tumefied, and painful; prevents the development of healthy suppuration, and indefinitely retards the cure. Heat, on the contrary, softens the tissues, assists the reparative fluids, favours the exhalation of those which form the cicatrix, and renders the cure speedy. Finally, gangrene is not so common as is generally supposed, as many of you may be convinced who have observed the cases furnished to us by the events of the years of 1830 and 1832.

One of the causes that have a great influence over these kinds of wounds is, as you may easily conceive, the natural disposition of the wounded. For example:—suppose a young soldier, who believed himself for ever separated from his friends, for whom his affection was exceedingly great; or an expert warrior, who has lost the battle and its consequences; either from the one or the other a degree of melancholy would ensue, which would bring him to the greatest despair. Add to these, privations of every kind; no surgical aid; different temperatures of atmosphere; the effects of long and rapid displacements; in a word, all kinds of disasters of war which may happen to the unfortunate wounded. In civil war, on the one side, there is an extreme state of exaltation, an enthusiasm carried to its greatest extent; on the other, a dulness, melancholy reflections for the present, much inquietude for the future, which is equally unfortunate for both parties, either the conquerors or conquered. Thus, in 1830, the mortality was much less considerable among the citizens than among the military; in 1832 it was much more, comparatively, among the wounded citizens of the 5th and 6th of June,

than among those of July 1830. This remark has been made by many others besides myself, and noticed in all the hospitals of Paris. What was the cause of this difference? The moral situation of the wounded, for there were but few variations;—the season was the same, the mode of treatment not different, and the same care was taken of them. The cholera was on the decline, and none were attacked with this affection. It has also been observed in battles, that there was a vast difference of mortality between the conquerors and the conquered. I have only another remark to make as a proof of the influence of which I am speaking. The wounded of June, in whatever rank they might have fallen, all submitted more or less to causes of moral weakness; this increased the danger of their wounds, and with much more difficulty was the cure completed. It is that the joy of triumph expires before the pain, for having spilt the blood of their fellow-citizens.

Moral accidental impressions are not less dangerous. A sensation of joy, fear, or spontaneous emotion, &c., frequently determines symptoms, which terminate unfavourably. Examples were not wanting in 1830 and 1832. A young man with fracture of the leg was going on remarkably well, when suddenly he became the subject of violent fever; agitation and other symptoms of inquietude supervened, which soon carried him off, his landlord having threatened him, the previous evening, if he did not pay his rent, to sell his furniture Another labourer, who was slightly wounded in the hand, died speedily from nervous symptoms, in consequence of a girl, whom he loved, abandoning him. Many of those who were wounded on the 5th and 6th of June died a few hours afterwards, in consequence of being imprudently told, that as soon as they got well they would be taken before the council of war.

We will next examine the different seats of gun-shot wounds; they will present to us a number of peculiar phenomena and special indications, in consequence of the regions and organs which are affected by them.

Wounds of the head affect the different regions of the cranium and face. In the cranium, the soft and hard parts, the brain, and its appendages; in the face, the base of the cranium, the frontal sinuses, the orbit, eye, and superior and inferior maxillary bones. When the soft parts are only affected by the projectile they are generally but slight; but, in the first place, they are very difficult and tedious to heal, and slow in forming their cicatrix. They sometimes become complicated with erysipelas, tetanus, hæmorrhages, and other accidents resulting from nervous, aponeurotic, or cellular lesion, which easily produces inflammation.

Erysipelas very frequently attacks the head in consequence of gun-shot wounds. Its invasion is indicated by shivers, fever, and occasionally delirium. The skin afterwards becomes of a light rosy tint, sometimes more œdematous than red; the parts become tumefied, hot, and give a tense appearance, and, in general, these are accompanied with nausea and vomiting. The treatment of this accident, if the wound is narrow, consists in making a crucial incision in the part; this will sometimes afford immediate relief to the patient. If there exists at the time much gastric irritation an emetic should be prescribed. If the subject is young and vigorous, and the inflammation violent, extensive bleeding may be adopted with advantage. The administration of mild purgatives is useful, if the intestinal canal is overloaded. Blisters may also be applied over the seat of the disease; this occasionally has succeeded in arresting the progress of erysipelas, but, at other times, has frequently not exercised the least control over it, and it has been necessary to establish a permanent suppuration.

Diffuse phlegmon supervenes after wounds of every description. When the head is attacked by this disease, it is not situated in the sub-cutaneous tissue, as in the limbs, but in the *sub-aponeurotic cellular tissue*, which distinction is of the highest importance. The fore-running symptoms are ordinarily shivers, cephalalgia, nausea, vomiting, &c. The hair becomes extremely sensible; there is tumefaction of the periphery of the cranium, which is emphysematous, and also œdematous. The fever is continued, and accompanied with violent delirium; the forehead and ears become affected; and, at the expiration of two or three days, the sub-cutaneous cellular tissue becomes infiltrated by the suppuration; in seven or eight days the soft parts are separated from the cranium, and fluctuation becomes evident. An incision is either made, or the pus spontaneously makes its exit; there is an abundant discharge of fœtid matter. After this the cranium diminishes in size, the sufferings of the patient are calmed, and he appears to be going on well; but, at the expiration of two, three, or four days, large portions of gangrenous cellular tissue present themselves at the opening; these are extracted, the suppuration becomes very abundant, and the patient dies, either from exhaustion, from repeated hæmorrhages, or acute inflammation of the encephalon. On the autopsy pus is found in the cavity of the arachnoid, on the surface of the brain, and the dura mater is deglutinated from the internal surface of the cranium; on the exterior the pericranium is destroyed, the bone is denuded, and necrosis commenced, though the sub-cutaneous cellular tissue, the vessels supplying it, and the skin remain perfectly healthy. All this points out the great importance of making free incisions into the different parts of the affected surface, when the inflammation has not been able to be overcome.

When the projectile passes with sufficient force to attack the bone, the lesion is confined to the walls of the cranium, or it may penetrate through the tables of the cranium to the brain. All the parts of the arch of the

cranium, as you know, are not of the same thickness, and consequently do not offer every where the same resistance. It is thicker near the base of the forehead, at the occiput, mastoid processes, and thinner at the temples and forehead. At twenty paces, shot cannot penetrate the interior of the cranium, nor even in the thickness of the osseous tissue; but they remain either at the surface or in the soft parts, where they may be felt and extracted. If the weapon be close, the shots frequently penetrate into the brain. A ball may strike the cranium perpendicularly without fracturing a bone; but this kind of wound is always serious, in consequence of the commotion and contusion of the brain, the symptoms of which are manifested in three or four days, or cerebral inflammation is developed frequently after the fifteenth, twentieth, or twenty-fifth day. If the projectile follows an oblique direction, it will determine considerable lesion, by traversing the soft parts to a greater or less extent, and, moreover, cause a primitive or consecutive necrosis, forming thus a compound lesion. A ball may penetrate and lodge in the osseous tissue, without entering the cavity of the cranium. In 1814, many accidents of this description were observed, but in 1830 not one was discovered to have taken place. It is owing most probably to the guns being discharged at this latter epoch very close, and the projectiles traversed the entire parts. I have seen a ball engaged in the frontal sinus, and a fistulous opening was the consequence. When the patient blew his nose, air penetrated under the integuments of the temple, and a soft, elastic, crepitating tumour was the result, which, from pressure, was easily diminished. A slight compressive bandage in this case was employed with advantage. If the projectile is gifted with a sufficient power to produce fracture of the bone and depression of its wall, without penetrating the interior, it produces all the phenomena of compression or commotion. A young man, wounded in July, received a ball just above the middle of the left eyebrow; the bone was depressed, and he remained *for eight days in a state of unconsciousness.* When he became sensible, he complained of a continued pain in the head; the wound was not cicatrised. The depressed bone was extracted; after which the cephalalgia disappeared; his health improved, and the wound soon cicatrised. Lastly, if the projectile penetrates the cerebral substance, there is either instantaneous death, or the formidable phenomena resulting vary, according to the greater or less extent of the lesion produced.

In my next lecture, I shall speak of the general, immediate, or consecutive effects of gun-shot wounds on the brain, which are commotion, compression, contusion, and inflammation.

Reviews.

Bridgewater Treatises: Chemistry, Meteorology, and the Functions of Digestion, considered with reference to Natural Philosophy. By William Prout, M.D., F.R.S.

Mankind have at all times been ingenious in inventing modes by which some memorial of their worth or abilities, of their exalted rank or reputation, might be transmitted to posterity. The poet, and the man of letters, command the tribute of posthumous fame by the force of their genius; the philosopher, by his discoveries. But present wealth and station have no means of perpetuating the existence of their possessors but by aid of the luxury of art; and it is on the picture, the statue, or the palace, that their hope of future renown must be based. Thus the "dread of falling nought" may be said to give origin to all that ennobles sentiment and refines taste, to the arts of painting, of sculpture, and of architecture.

The late Earl of Bridgewater has adopted a new method of encircling his name with present fame and future glory—that of associating it by means of a most noble and munificent bequest with the labours of some of the most esteemed philosophers of the present day. The subject, however, to which he has directed the attention of these eminent persons is so important; the effect which its popular illustration is so calculated to produce; the change which the full development of its varied argument must eventually work in the moral and religious feeling of society, almost induced us to forego the charge of selfishness, and to consider his liberal benefaction as a pure and unmingled tribute to science in furtherance of a great public purpose.

The argument of the Bridgewater Treatises is full of wisdom, though it has been generally departed from. It is not the demonstration of the existence of a Great First Cause that is required by the learned founder—that part of the argument he takes for granted—but he requires that these treatises contain proofs of the power, wisdom, and goodness of God, as manifested by discoveries in arts, in sciences, and in the whole extent of literature. As the former part of the subject has been too much insisted on, as too much small shot, as Dr. Parr would have termed it, has been fired in

this direction, we shall add a few words in proof of the almost chimerical existence of the atheist, about whom so much pains have been taken to confute.

Atheists, if any such persons do exist, may be divided into three great classes, the material, the immaterial, and the moral atheist.

The immaterial atheists are those philosophers who, like Hume, have reasoned away their instinctive belief of an external world, and admit nothing but the existence of their own ideas. With these ingenious persons heat or cold, the sea, a carriage, are nothing but ideas. They admit that their ideas occasionally occur in sequences; but, as they can perceive no necessary connexion between one idea and another, the inference of a Great First Cause would be a conclusion not warranted by their premises. These are the philosophers for whom Swift invented his flappers in the flying island, in order to recal them from their abstract propositions back to the common instincts of life. Hume admits, however, that, although he could not confute his own reasoning, yet he felt there was something unstable in the conclusion. It seems to be believed by the writers of the Bridgewater Treatises, that men are atheists from not perceiving evidences of design in the works of the Creation. It is quite certain, however, that the greatest historian of modern times, and whose works are so calculated to establish the existence of general principles in morals, did not deny the existence of most abundant proofs of design in the physical world; he only contended that he could not, consistently with his own principles, infer the existence of a Great First Cause. This class of atheists, it is evident, from the shrewd logic and hyper-attainments necessary even to understand their system, must ever be an infinitismal fraction of society.

The material atheist, also, can never be a large class of persons. The rude barbarian, who fell down and worshipped Columbus on the prediction of an eclipse being verified; or the savage, who, like Friday in Robinson Crusoe, adored his master's gun, can never free himself from the instinctive propensity, common to all men, of referring every effect to a cause. The material atheist, therefore, must be limited to men of highly-cultivated intellect, who, admitting design in all they see, still contend that no Almighty fiat has gone forth. They conceive that the properties with which matter is endowed are sufficient to account for all the phenomena we witness; and, therefore, that nothing exists but matter, of which mind is the product. It will be plain, then, that to be an atheist of this class, a man must possess, like La Place, an extreme power of acutely reasoning on a given subject or science, but who is incapable of taking an extended and general view of the works of Providence. Buonaparte expresses his great disappointment at finding La Place nothing but a great mathematician, and quite an impracticable person in the business of life, and unable to take a broad view of what was submitted to his consideration. It is in the moral world that men find the greatest difficulty in admitting an Almighty and intelligent power. The occasional prevalence of physical over moral causes, as shipwreck and the entire subversion of great cities with their inhabitants, the moral convulsions of war, the constant opposition of passion to intellect, the inequalities of fortune, the opposed states of superabundance and of almost absolute privation,—these, when they fall heavily on men, lead them almost to doubt whether those general laws which mark the path of innocence and virtue will ultimately terminate in that happiness to which they look forward in pursuing them. It makes them doubt whether a special Providence ought not to interrupt the course of those general laws; and it is only the recollection that the operation of moral causes embraces a wide scope of time,—it is not till humbled by the comparison of their own insignificance compared with their great Creator's power, that reason resumes its empire, and doubt gives place to resignation and submission. We have entered thus far into the general argument, to show that the value of these treatises will depend, not so much on their combating the chimera of atheism, as in their displaying the power, wisdom, and goodness of God, as evinced in the phenomena about which their several sciences are conversant. We will now turn to the volume before us.

Dr. Prout very modestly affirms that he labours under much disadvantage in applying the facts of chemistry for the first time to the explanation of natural theology. We, however, feel rather inclined to congratulate him on having to enter upon a field so fruitful,

yet so fresh and untouched; and it is impossible that his ingenious, talented, and candid mind should not have made many points in treating this beautiful subject. Accordingly, we find him demonstrating, from chemical phenomena, the existence of the world, with all its present properties, prior to the creation of man; and that its existence was not the result of chance, he proves from the adaptation of some of its most principal features to the chemical agencies of the sun, the great centre of light and heat of our system.

"The globe," he says, "which we inhabit, is placed at a certain distance from the sun, the great centre of our system, and of light, and of heat, and where, of course, according to the laws which light and heat obey, they must act with a certain intensity. Hence it was necessary that the materials of our globe should have a certain degree of fixity, otherwise they could not exist. If, indeed, there had been no ulterior views with respect to the destination of the globe, all that would have been requisite, would have been to have made it sufficiently firm to move through space; and for this purpose, the more homogeneous and compact its composition had been, the better. But what are the facts? Our globe, though stable, so far from being homogeneous, is composed of a variety of substances, all differing from each other in their properties, some being solid, some fluid, and some aëriform, under the common circumstances under which they have been placed." "Thus water, within very narrow limits of temperature, is a solid, a liquid, or a gas; and yet these very narrow limits of temperature, neither more nor less, are precisely those which exist upon the surface of our globe, where they are the natural and necessary results of its situation in the universe, and of the general laws which govern light and heat. Had the properties of this body been otherwise than what they are, or had the general temperature of our globe been different, water would have existed altogether in the solid as well as in the gaseous state, and its most important properties would have been unknown. Hence it seems almost impossible to arrive at any other conclusion than that the temperature of the earth, and the properties of the water on its surface, must have been mutually adapted to each other." "Now," he adds, "when we see similar happy adjustments in every object around us, in the different elements, of the air we breathe, the soil we tread on, the rocks in all their varieties, composing the solid crust of our globe. When we see all these things, and duly reflect upon them, it becomes absolutely impossible to admit so much happy adjustment, so much apparent intelligence, so much of what the veriest sceptic, under other circumstances, would allow to have been evidences of design, can be any thing else than design, or have resulted from any unintelligent cause whatever."

Having thus formed our globe, and shown it to be a part of a great system, he, in another part of his work, proves man to be a later creation, by showing that all organised beings are formed with reference to the atmosphere, and that previously, therefore, to the formation of an atmosphere, organised beings could not have existed. Again, he evidences the goodness of the Almighty by the circumstance that that wonderful Being has rendered the chemical constitution, or laws of matter, permanent since the creation of man. For it is plain that if the carbonic acid of the chalk, which forms so large a portion of the crust of the earth, had been disengaged, by any cause, from its combination with lime, or had the salt of the ocean parted with its chlorine, all animated nature must have perished. Thus we have two great facts shown by chemistry, the existence of the earth, with chemical reference to a system, and consequently the fair inference that it was made by an intelligent cause; and again, the active interference of, in all probability, the same Agent by whose power secondary creations, having reference not only to the earth, but also to the sun, have ensued. We have also the fact that during the many thousand years that have elapsed since the creation of man, that the present chemical properties of the globe have not changed, and consequently, during that long period, that we have no experience of light or heat, or, indeed, of any combination of chemical agents, having produced a single organised being, as is imagined by La Marck, and other French philosophers.

In another part of the work he inquires into the elementary chemical form of bodies; and, after giving us his ingenious theory of molecular attraction, breaks out into the following eloquent passage:—"what can be more wonderful than that the self-same che-

mical forces, differently directed, should produce not only all that endless change of property, of form, and of condition which we see around us, and which are so beneficial, and even necessary, to our existence; but likewise some of the most terrible displays of power in nature, as, for instance, in the utmost intensities of heat, of cold, and of light—the terrors of the thunderbolt, and the irresistible energies of the earthquake; nor, on the other hand, are the cohesive affinities existing among the molecules of matter, much less wonderful and important; for, if similar molecules had not been constituted with self-attractive and self-repulsive powers, there would have been no aggregation of the same matter in symmetrical groups—no order or regularity, no separation or purity,—in short, there would have been no common bond of union, and the whole would have been dispersed throughout nature, as accident or other circumstances might determine."

Having, we trust, impressed our readers with the same favourable opinion that we ourselves entertain of this popular work, it becomes our duty to point out a few errors, which our author appears to have overlooked, and which we hope to see rectified in a new edition. As the object of this treatise is to convince the "veriest sceptic," we were surprised to meet in the very threshold of the work, in the very first page, with the following inconclusive proof of a Creator, founded on a *petitio principii*, as "animals in cold climates have been provided with a covering of fur, men in such climates cover themselves with fur." But the clother of the animal *must be admitted to be the Creator of the animal*, and, by extending the argument, the Creator of man himself,—of the universe. We have heard of a short way with deists; but this short way with the sceptic is wanting in all the soul of brevity, sound induction, for it assumes the very point in dispute. The proof also of the great attributes of the Deity is equally assumed and hurried to a conclusion.

"By contemplating, in the abstract, the boundless relations of time and space, where no end can be conceived to addition and subtraction, we arrive at the only notion of infinity of which our nature seems capable. These once obtained, the obvious and necessary existence of cause within the narrow sphere of our observation naturally leads us to inquire, can this cause be infinite? and thus we are led by degrees to the sublimest of all conclusions,—that a cause or agent, commensurate with infinity, omniscient, omnipresent, eternal, and omnipotent, must exist; in other words, a God. Now, surely it does not follow that because we infer the obvious and necessary existence of a cause, which, for the sake of argument, may be good or bad, and because we are able to form some notion of what we choose to term boundless space, that the great agent or being whom we adore must be omniscient, omnipresent, eternal, and omnipotent. These attributes surely must be deduced from very different data than those which addition or subtraction can afford us. We think also that the attempt to deduce the same attributes from a consideration of the chemical properties of matter is equally unfortunate, it is as follows:—

"The nature of the power with which the molecules of matter are endowed is truly astonishing; and what a sublime idea is this calculated to convey to us of the power and wisdom of that Being who made the whole. When and where, we naturally exclaim, did this Being exist? whence his power? There is but one answer to these inquiries,—the Being who contrived all these things must have *pre-existed from eternity*, must have been *omniscient*, must have been *omnipotent*, must have been God." Surely all this is a very exaggerated inference from a mere consideration of the chemical properties of our globe; for it is very possible that the earth may have existed but little longer than man, and consequently its chemical construction cannot explain the pre-existence from eternity of its Creator; neither can the omnipotence of the Almighty be shown from a consideration of the superficial crust of this globe. Such a conclusion can only result from a perfect understanding of that unity of design, which prevails throughout all the planetary system, the only portion of the universe in which we are able to trace his power, and that perhaps but a fractional portion of his works. But our author abounds in similar non-sequiturs.

Towards the close of the work, Dr. Prout puts the question, what is to become of man? is there no part of him which, surviving the general wreck, is reserved for a higher destiny? and he arrives at the conclusion that the soul is immortal, as follows:—"Can that within man, which reasons like his immortal

Creator, which sees and acknowledges his wisdom, and *approves* of his designs, be mortal like the rest? Is it probable, nay, is it possible, that what can thus comprehend the operations of an immortal agent is not itself immortal?" This is feeling, and not science; and the argument for the immortality of the soul is not one iota advanced by this rather common-place appeal to our very humble apprehension of what may be. We are satisfied, however, that the most convincing proofs that have yet been given of the soul's surviving the body, may be drawn from chemistry. Chemistry teaches us, that however various the mutations of matter, however differently it may be combined, yet that nothing is lost, nothing is changed, of its primitive elements. Such is the extraordinary and unexpected fact which chemists have deduced from an observation of matter in detail, while astronomers have shown that in mass the earth is the same in weight and quantity as when its path was first observed by man. Nothing therefore in the material world appears to be lost or destroyed. We would therefore ask, is it probable, is it possible, that that wonderful principle, which uses matter as its agent, which subdues it to its own purposes, which organises out of it the most involved and complicated structures, can alone, of all subtances, be itself lost or become annihilated. We therefore think it may safely and logically be affirmed that, according to every rule of analogy, the soul is of necessity immortal, unless annihilated by the express interference of its Almighty Creator.

We have thus pointed out some of the beauties and some of the imperfections of this work—imperfections which we are satisfied have arisen from haste, or the novelty of the subject, rather than any want of power. We cannot, however, say with truth, that all that might have been made of the argument has been made. We looked forth with much expectation for an examination of how far the present geological formation of the earth's surface was chemically compatible with its previous state, but found the subject untouched. We also think that in a popular work more adaptations of the fifty-four elementary bodies, in their agricultural, mechanical, and other uses, might have been pointed out. We are of opinion that this production will not add anything to the already considerable scientific reputation of Dr. Prout, but it will not detract from it. In the strictly chemical portion of it there is nothing new beyond his ingenious theory of the aggregation of bodies, while the meteorological portion is little more than an abridgement of the able and excellent work of Mr. Daniel. In the portions destined to explain the functions of digestion, we think, considering the many points in dispute between him and Tiedemann, that Dr. Prout is rather below than equal to himself. We are sceptics likewise with regard to the many culinary hints. It may be true that the English do not understand eating and drinking; but, as Swift tells us, the worst clothes ever worn were made by philosophical tailors, so we cannot help believing that the worst dinners ever eaten will be those prepared from a philosophical recipe, and we beg it to be understood, that we think the honour of our Journal concerned, and that we are strict conservatives (in spite of all that Dr. Prout advances), in regard to mutton-chops, beef-steaks, and plain boiled and roast, with all their additions.

The Nervous System, Anatomical and Physiological; in which the Functions of the various parts of the Brain are for the first time assigned; and to which is prefixed some account of the Author's earliest Discoveries, of which the more recent doctrine of Bell, Magendie, &c., is shown to be at once a Plagiarism, and Invasion, and a Blunder, associated with useless experiments, which they have neither understood nor explained. By Alexander Walker. Octavo, pp. 704. Smith and Co. 1834.

The physiology of the nervous system, from the days of Aristotle and Galen up to the present period, has been a subject of much difficulty, and given rise to much controversy. It involves one of the most abstruse questions in science; to determine the connexion between mind and matter, and to show how they reciprocally operate upon each other, many learned disquisitions have been written. Poets and metaphysicians, theologians and physicians of the highest celebrity in every nation in Europe have been engaged in the task, yet we still know little respecting its nature. We know nothing, satisfactorily, of the minute structure, the real mechanism either of the brain, the spinal marrow, or their nerves. It

is admitted by physiologists, that the mind is displayed through the *cerebro-spinal system;* but why one portion of this system should manifest a different property to another we are entirely ignorant. Why the anterior root of a spinal nerve should bestow on an organ the power of motion, and the posterior root the property of sensation, their physical characters do not give us the explanation. We know simply the facts. The anatomy is as imperfect as the physiology is obscure. The nervous system is unquestionably the most important in the animal machine. It is the receptacle of the mind, through its agency we become acquainted with the surrounding world, and through its agency all our movements arise. Within the last twenty years the study of this system has been pursued in the path of demonstration. Bold assumptions and gratuitous hypotheses have given way to inductive philosophy and rigorous enquiry. Assertion must now be based on experiment, or data equally as satisfactory. Analogy alone, or experiments alone, would be an ignis fatuus which would often deceive. The investigations of Bell, Magendie, Mayo, and a host of others have enabled us to arrive at more correct conclusions respecting the nervous system. It is but still, however, in its infancy. The conclusions of Sir C. Bell have constituted a new epoch in physiology and pathology. These views, which have so elevated him as a physiologist, are detailed in a masterly manner in his *Exposition of the Nervous System*. He gives them as his own discoveries, and the world in general has ratified the assertion. By numerous and repeated experiments he was led to infer, that the anterior roots of the spinal nerves were the nerves of motion, and the posterior roots the nerves of sensation, and that the anterior columns of the spinal marrow, which are continued upwards into the brain, are motory parts, and the posterior columns endowed with sensation like the nerves which arise from them. These are but a few of his discoveries, but they are the results of well conducted experiments, of philosophical analogy, and are corroborated by pathology and morbid anatomy. What claims M. Magendie has to these discoveries we are unable to ascertain. That the investigations of Bell and Magendie were going on at the same time without either being aware is a fair presumption, and the circumstance of their conclusions being nearly alike, is a cogent proof of the verity of the doctrines.

After these preliminary observations we come to Mr. Walker's book. He thinks himself grievously injured,—those laurels, which deck the brow of Sir Charles Bell, we have no doubt, Mr. Walker believes were intended to adorn himself; but *his* garlands, we fear, are not yet woven. He is a bold man to accuse two of the greatest physiologists of the day, of plagiarising from himself those doctrines which, we feel assured, will immortalize their names. Literary piracy is as great a moral crime as the stealing of merchandise. We believe, however, in the innocency of the accused. We shall deal fairly with Mr. Walker. Let us hear his accusations and his defence. In the Archives of Science, in the year 1809, Mr. Walker paraphrased the descriptions of Galen, and thence presented to the world a luminous exposition of the nervous system. The following quotation is from his work:—

"The division of nerves into those of motion and those of sensation is absurd, because all nerves are nerves of motion; the proper division is into nerves of sensation, and nerves of volition, or nerves of impression, and nerves of expression. Now as, in some cases, sensation exists without volition, and, as almost all nerves arise by distinct filaments, I am of opinion, that wherever a part, having both sensation and motion, is supplied from one nervous trunk, that trunk envelopes both a nerve of sensation and volition. This is confirmed by nerves which are at once connected with sensation and volition, consisting of fibres, as the generality of nerves do; while nerves of mere sensation, without volition, are generally of an uniform softer structure, as the optic, auditory, &c. The only (other) apparent difference between the nerves of sensation, and those of volition, is, that their motions take place in different directions. The latter, therefore, may be said to resemble the arteries, the former, the veins."

He next refers to the elaborate investigations of Tiedemann, in which is shown the development of the various parts of the nervous system, commencing with the spinal marrow, the medulla oblongata, and the successive evolutions of the different parts of the brain; to the conclusions of this distinguished physic-

logist our author modestly claims his possession of priority.

The views of Tiedemann are known; the following is from our author.

"But it may be questioned, by which nerves, columns, and cerebral masses, the action ascends to the brain, and by which it descends to the muscles. Fortunately, here nature also directs us. Several nerves of mere sensation (the olfactory, &c.) join the anterior masses, hence they must be the ascending; one nerve (at least the internal oculo-muscular) of mere motion proceeds from the posterior masses, hence they must be the descending; for sensation, as already said, must ascend to, and volition must descend from, the sensorium commune (brain)."

"Thus, then, it seems to be proved, that medullary action commences in the organs of sense, passes, in a general manner, to the spinal marrow, by the anterior fasciculi (bundles) of the spinal nerves, which are, therefore, nerves of sensation, and the connections of which with the spinal marrow or brain, must be termed their spinal or cerebral *terminations*."

That *these* particular views were entertained by Mr. Walker, even as long ago as the year 1807, we do not doubt. The testimony of Mr. Lizars would be sufficient evidence, independent of the author's affirmation. Here we have one of the allegations against Sir Charles Bell. If Mr. Walker had ceded any meed of credit to his predecessors, for having been acquainted with the difference between the nerves of volition and of sensation, he might then have expected his contemporaries, or his successors, to have done him like justice. Mr. Walker gives the opinions of Galen, with addenda, interspersed with some imaginative speculations of his own; based upon demonstrative facts? no!—upon conjecture alone. Throughout the whole of his work, he is constantly decrying experiments on animals, because he does not experiment himself, fully relying on his own omniscience, in the penetration of his own intellect. It was conjectured that the principles of electricity, galvanism, and magnetism, were analogous, but philosophers did not admit the position as a fact; it was not until Faraday, by his brilliant demonstrations, triumphantly proved the identity, that this conjecture was received as a truth. Galen suspected, centuries ago, that the nerves of sensation arise from the brain, and the anterior part of the spinal marrow, and the nerves of motion from the posterior surface. Such were the opinions of Mr. Walker in 1807, and such are his opinions, it would appear, at the present day. But these are not the opinions of Sir Charles Bell and Magendie; they are totally opposite. If Sir C. Bell, prior to the announcement of his doctrines, had found in the writings of Mr. Walker, or of the no less celebrated Galen, views alike to those he has published as his own, he would have been guilty of plagiarism indeed. Now, let us see how far the opinions of Bell and Magendie bear a similitude to those of Mr. Walker. Mr. Walker states as his belief, that the nerves of *sensation* are connected with the *anterior columns* of the spinal marrow, and that the nerves of *volition* are connected with the *posterior columns*. Now for the contrast. Sir C. Bell asserts that the nerves of *sensation* are connected with the *posterior columns*, and the nerves of *volition* with the *anterior columns*. Mr. Walker cannot, after a lapse of so many years, recognise again the property which he has lost, but he nevertheless accuses Sir C. Bell of having stolen it, yet to every one else in "*court*," it is as much unlike as darkness to light—nay, it is a perfect antipode.

Mr. Walker cannot, surely, be serious in accusing Sir C. Bell of plagiarism; for on the chief point in dispute it is palpable to every one, that the two authors entirely disagree in their sentiment. The contended point between Mr. Walker and Sir C. Bell is not of trifling importance to the world. The verity alone of the question is one of mighty moment to the physiologist and the physician,—whether the nerves of motion be connected with the anterior columns of the spinal marrow, and those of sensation with the posterior, or it be the very reverse, are questions which it is desirable should be satisfactorily ascertained.

We are aware of the extreme difficulties which surround the subject, and which prevent its clear elucidation. Bellingeri states that the nervous fibrils which originate from the posterior columns of the spinal marrow, excite muscular contractions; so far he is an agreement with Mr. Walker; but, in addition, he believes them to regulate and control the extensor muscles, and the flexor muscles to be

under the dominion of the nerves from the anterior columns. Schoeff affirms, that both of these series of nerves govern the voluntary movements. Magendie's experiments display apparently the existence of both the property of sensation and of motion, as well in the anterior as in the posterior columns, and the nerves which respectively arise from them. "When doctors disagree, who shall decide?"

Mr. Walker actually gives Magendie credit for discovering, what the British public in general ascribe to Sir C. Bell. He is determined to carry away this trophy from Sir Charles, and place it upon another, having failed to claim it for himself.

A quotation is given from the writings of an extensive experimentalist, Professor Muller, of Bonn. The experiments were performed on frogs, to observe the phenomena which might result on division of the roots of the spinal nerves. "When the posterior root," he says, "is divided, the animal appears to experience 'quelque douleur;' if the distal or unattached portion be now seized and irritated, there is not the slightest trace of movement in any of the muscles of the trunk, or of the extremities. When the anterior or abdominal root is simply touched, convulsive movements of the extremities immediately follow. The same phenomena, only more violent, are observed when this root is cut and irritated." Galvanism was then appled to the nerves: the following are some of the results:—"The galvanic experiments were performed at first with a single pair of zinc and copper plates. Upon applying the two plates to the cut ends of the anterior roots, the muscles became convulsed; but no such effect was ever produced when they were applied to the posterior roots."

What conclusions, we would ask, is it logical to make from these experiments? Mr. Walker regards them as being strongly corroborative of his own views. We beg to differ from him, and feel assured they substantiate those of Sir Charles Bell.

The author, when advocating the importance of analogy in physiological inquiries, makes the following quotation from Tiedemann:—"Comparative anatomy unveils to us the origin and successive development of the brain and nervous system, from the most simple animals up to man, the most complicated. There is no set of organs, in the formation of which we find so perfect a gradation from the simple to the compound, as in the cerebral and nervous system;—in fact, this system is established on an uniform plan in the whole animal scale. So in studying the gradual complication of the structure of the brain in animals, can we have a clear idea of the complex organisation of the viscus in man, and at length succeed in comprehending its assemblages and relations." This is Tiedemann's view of the subject. It is not ours, nor is it, we believe, in accordance with that of the majority of physiologists in Europe.

The author differs from all his predecessors and cotemporaries on the cause of pain. He asserts, that pain is connected with the anterior surface of the spinal cord, and with what *we regard* as the motor nerves. "The object," he says, "of the sense of touch is pain. If pain, then, belong to the sense of touch, what is its form?" We cannot follow him through all his metaphysical rambles. It will suffice that we allude to his peculiar opinion. We entertained the notion, that the sense of touch was a simple modification of common sensibility; that the power of distinguishing the forms of bodies was the result of experience, not depending solely upon the nerves themselves, but upon the brain and the nerves conjointly: we thought, also, that the property of common sensibility was resident in the sensitive portions of the spinal nerves, the branches of which were copiously distributed in the integuments of the body, so as to augment their acuteness of sensation. Further, we had imagined, that this sensation in health was a "pleasurable" one, that the amount of feeling was in a great measure dependent upon the number of nervous twigs supplying the part, and regulated by the quantity of blood which traversed the structure of these nerves, and that *increased sensibility* was *pain*. We saw, in an inflamed finger, a series of phenomena, arising consecutively. First, an influx of blood to the part, producing distension, succeeded by heat, redness, and pain; and we gave a local habitation to each phenomenon. But, lo and behold, this new prophet has transferred the sensation of pain to the sympathetic nerve, to the branches of this nerve which supply the coats of the vessels; branches to which we allotted the office of re-

gulating the functions of secretion, circulation, &c., and in which we had inferred, from our own experiments and reflection, and those of others, that the property of sensibility was entirely absent, that its branches, or its ganglia, might be torn, or cut away, without the slightest manifestation of pain on the part of the animal.

The author of this volume, however, is entitled to much credit. It displays great research,—theories, some of them possessing glimmerings of truth, but many at total variance with anatomy and common observation. We shall probably refer again to other parts of this work, when we trust to find some reclaiming virtues in Mr. Walker; that he will have ceased his revilings, his embittered animosities, and his jealousies; that we shall find him, in short, displaying more of the true philosophic character. We recommend the book,—it is an elaborate production.

A New Synopsis of Nosology, founded on the Principles of Pathological Anatomy. By Dr. Hume Weatherhead, Member of the Royal College of Physicians, &c. 18mo. pp. 90.

Nosology, as the author observes, simply means a discourse on diseases, but, by conventional acceptation, it is used to signify their systematic classification. In the progressive improvement of the science of medicine new facts and observations are daily elicited and substantiated, in a multitude of detached works, by writers of eminence, which shed, consecutively as it were, a new lustre on medical science. It is the object of this Synopsis of Nosology to assemble together all the facts which have been promulgated, and to arrange them into something like a systematic arrangement. Whether this intention be fulfilled our readers are to be the judges. The anatomical and physiological doctrines of Bichat,—one of the greatest men that has adorned the annals of science,—the author has taken as the foundation of his system. He has separated the inflammations of the different tissues one from another, a separation of so much importance in a practical point of view, not merely as tending to facilitate the correct study of symptoms, and the satisfactory illustration of diseased actions, but enabling us to accomplish the paramount object of removing them by remedial agents. The study of the different structures in relation to their mechanism and functions enables us, to use the words of the writer, "analytically to connect symptoms with the functional disorder and disorganisation of organs, since each tissue has not only a diseased action peculiar to itself, but is endowed with its own particular "sensibilities" and "irritabilities;" terms, however absurd they may be, yet usage permits of their application. Upon these circumstances it is that the characteristic symptoms of a disease so frequently depend, as well, also, as their tendency to terminate in a particular manner. The pain attendant on a severe catarrh is not near so violent as that on a slight pleuritis. Phlegmonous inflammations are apt to terminate in suppuration. Inflammation in fibrous structures, unless complicated with this action in surrounding organs, rarely presents such a termination. It is upon such pathological principles as these that the author bases his new arrangement. We find, therefore, that he separates and distinguishes the inflammations of the mucous from the serous membranes, and the fibrous from the simple cellular. Diseases he divides into four classes; the phlogitici, the hæmapharmatici, the neurotici, and the vitia. Now, the celebrated Cullen did the same; but, in examining the two arrangements, the reader will perceive few points of resemblance, for the "phlogitici" includes many diseases not among Cullen's "phlegmasiæ;" the "hæmapharmatici" does not comprise one of the diseases of Cullen's "cachexiæ," and as for this nosologist's "locales," independent of its being a new word *introduced* into the classes by Cullen, it comprehends a great variety of diseases that are not local, but entirely of a constitutional character, an objection certainly not applicable to the old word "vitia." Our limits will not allow us to analyse a work embracing so extensive a subject as a system of nosology so fully as we would wish, but, in reference to the work itself, we cannot omit noticing a useful novelty in this arrangement, that of placing the sequelæ and sub-sequelæ of diseases immediately after those from which they naturally ensue. "Diseases," as the author remarks, "are not all primary in their nature; on the contrary, a great number of diseases are entirely morbid results of the primary disease, and many are

again the sequences of these very morbid results themselves." The author illustrates his position by taking sub-acute hepatitis as an example; a common morbid consequence of this disease is an interstitial deposition of coagulable lymph into the structure, which, on becoming organised, constitutes scirrhus of the liver; this is a sequela of the primary action, but it is not its ultimate result, as we shall perceive on pursuing the subject a little further. Scirrhosity gives a preternatural solidity and even induration to the liver; this naturally presents a constant and powerful obstruction to the free return of the venous blood from several of the abdominal viscera; a physical congestion of necessity takes place in all the branches of the vena porta, which, in order to relieve themselves of the engorgement, exhale into the abdominal cavity, from the serous surface, a greater quantity of fluid than the absorbents can re-convey into the system; hence "ascites" as a consequence results. Here, then, we have two consecutive sequelæ, each constituting a specific disease, the one being the sub-sequela of the other, independently of the primary disease. To exemplify which a diagram is subjoined, and this method of indicating the series of sequence and affinity of diseases is preserved throughout the synopsis.

The subject is one which affords us the greatest delight. It is, we are convinced, the only true basis upon which, not only the classification of disease, but the science of physiology and of therapeutics can be erected. The development of the principles was the product of a master mind. The name of Bichat has not only raised the medical profession in France to the highest pinnacle of glory, but his followers, in whatever country, even participate in his honours. Dr. Weatherhead is justly entitled to our warmest commendations. His synopsis displays a thorough knowledge of anatomy, physiology, and pathology. Need we say more. Every zealous member of the profession will, we are convinced, peruse this synopsis with delight.

CHAIR OF MIDWIFERY, GLASGOW.

Dr. William Cumin has been appointed by his Majesty the Regius Professor of Midwifery in the University of Glasgow, in the room of Dr. Lee, resigned.

THE

London Medical and Surgical Journal.

Saturday, September 20, 1834.

PARLIAMENTARY COMMITTEE.

We intend, in our next number, to commence the publication of the evidence which has been elicited by the Medical Parliamentary Committee. We shall present to the profession a digested but correct report of that evidence; so that those members, who were prevented from attending at the committee room, will still be furnished with the opinions of a great mass of the individuals, consisting of what are regarded the heads of our profession. Representatives of the four great divisions of medical practice were scrutinously examined. The information, which was obtained from them, has a reference, in the first place, to the constitution of the various corporate bodies in Great Britain and Ireland, the manner in which these institutions are conducted, and how they have been regulated since their first establishment, the objects and intentions for which they were founded, the mode of electing their president, committee, and other officers in each institution. In the next place it refers to the education of the different members of the profession in each division of medical practice, from the Fellows of the College of Physicians to the retailer of drugs. And, thirdly, the private opinions of each person examined, as to the efficiency, or non-efficiency, of the present system, with their suggestions as to alterations and improvements which might be effected in each and every department. We shall present the evidence as nearly as possible in the order in which it was given, commencing with the physicians, then proceeding with that of the surgeons, apo-

thecaries, and druggists. It would be impossible for us to publish the voluminous quantity of matter, which has and will be printed; but the substantial portion of it shall be presented as fully as our limits will permit. The medical, like the political world, is divided into three great classes, Tory, Whig, and Radical; we should be glad if it were not so. We purpose contrasting the arguments and opinions of each party, and balancing them fairly and candidly, both with respect to their number and rationality. The task, it must be confessed, will be a difficult and a laborious one, but it will nevertheless be attempted. We shall enter at large into the nature of medical education, a subject which every one admits, as at present conducted, is fraught with the greatest evils both to science and to the health of the population in this great kingdom. The system of education adopted in this country is exceedingly imperfect, affecting every division, physician, surgeon, apothecary, and druggist. Its baneful influence has long been felt, and long been appreciated; every part of the medical press has been for years holding the present system up to the odium of the public. At last the profession has arisen in one great body and demanded of the legislature to institute an inquiry; this inquiry is now completed, and it will be shown where the best education can be acquired, whether behind the counter, in a dispensary, or in the wards of an hospital. We ourselves do not object to the system of apprenticeships, for we know it to be of great value; but if five years of study be regarded by the College of Surgeons and the Apothecaries' Company as a sufficient length of time to prepare a youth to practise his profession, a five years' apprenticeship is most assuredly too long; if two or three out of those five years were devoted to the bedside of the sick, under proper regulations and restrictions, let it be in the wards of an hospital, or in the attendance on dispensary or private practice, young medical men, of the age of one-and-twenty, would be more capable of performing their duties justly to the public, and with more confidence and satisfaction to themselves. This proposition is so palpable, that we believe there are few who would not give it their admission. We would recommend most strongly and sincerely, to the officers of the metropolitan and provincial hospitals, the adoption of a system similar to that which exists in many parts of the Continent, viz. the apportioning of a certain number of patients to the care of each pupil, under the auspices of their respective officer. If each pupil had the charge of five or ten patients, was to note down their cases, their histories, symptoms, and the plan of treatment pursued, &c., he would become so familiarised with the particular diseases, that, on the commencement of his practice, he would be relieved from many of those anxious feelings, which arise in the minds of young practitioners, under the present system. But before this plan could be carried effectively into execution, numerous and important alterations would have to be made respecting the number of medical officers in each hospital, and the duties they would have to perform, but, above all, in the present mode of electing those officers. Perhaps, out of the whole profession, there could not be selected a more competent set of men than those who at present occupy such situations. To those individuals we cannot object on account of their incompetency; the majority of them are men of great experience, have studied thoroughly their profession, and are in extensive

private practice. But, however paradoxical it may appear, we do object to a considerable number of them; and the reason is not a recondite one. It is to the manifold engagements they have in private practice, and in some instances to their age, which would incapacitate them for performing such duties as would devolve upon them was this plan carried into execution. Even, under the present system, it is notorious, that there are individuals, who, from one or both of these causes, cannot, or at least do not, devote that time and attention to the hospital patients under their care, which justice and humanity demand of them, or to the pupils who have paid them largely for instruction.

AMALGAMATION OF THE PROFESSION IN AMERICA.

We observe, in the *Jamaica Physical Journal*, that, in one of the American states, the various licensed practitioners,—physicians, surgeons, and apothecaries, have amalgamated themselves into one great corporate body; all are to possess the same title, hold the same rank, and enjoy equal rights and privileges; they are all, in short, "Fellows of the College of Physicians and Surgeons." We rejoice to hear that such unanimity prevails,—long may it continue! America is the land of equality as well as of liberty. Its society, civic and political, is based on these principles. Ever since its emancipation from the thraldom of England, the terms liberty and equality have echoed and re-echoed from one quarter of her dominions to the other. Under such a system of government, and in such a state of society, this unity of the medical practitioners we can well imagine to exist, but we question its perpetuity. Subordination appears stamped indelibly on human nature, it is the chief stimulus to exertion, whether mental or corporeal.

DR. STOKES'S LECTURES.

Dr. Stokes's lectures have been a subject of controversy between the Proprietors of this Journal and Dr. Ryan. The latter, it appears, feels himself hurt, not so much because Dr. Stokes has refused to permit him to publish them, as because he has given them to us. Dr. Ryan, in his last number, says Dr. Stokes promised the lectures to him *alone*, if he continued this Journal, and afterwards complains of the alleged breach of promise in giving them to us, and in "favouring one to the injury of the other."

If Dr. Ryan means to say, that Dr. Stokes promised his lectures to him *personally* we must deny the assertion. Dr. Stokes made no promise beyond this; viz. that the party who continued the *London Medical and Surgical Journal* should have his lectures; and we must presume, that Dr. Stokes, having made himself acquainted with the facts and circumstances attending Dr. Ryan's *voluntary* retirement from the conduct of this Journal, and having given to us *exclusively* the privilege of publishing them, concluded that this Journal was *The London Medical and Surgical Journal*, and that Dr. Ryan's Journal, although usurping our title, and published as in continuation of our series, altogether new.

The common sense and justice of this determination, on the part of Dr. Stokes, it is not our place here to uphold. All the circumstances which preceded and followed Dr. Ryan's retirement are already before the public, and they will therefore be able to form an accurate judgment on this part of the subject without a word more from us. We shall leave it, therefore, and request the attention of our readers to a few remarks, which the appearance of one of Dr. Stokes's lectures, accompanied by some editorial remarks,

in the last number of Dr. Ryan's Journal has given rise to.

The first sentence of the lecture, as printed by us, is as follows:—

"Having spoken of the general treatment of paralysis after apoplexy, we come now to the local arrangement of the disease, or that portion of its treatment which consists in the application of stimulants to the *nerves and their origins.*"

In the lecture, as printed by Dr. Ryan, the first sentence is as follows:—

"I have now to direct your attention to the local treatment of paralysis, as I have already considered the mode of cure when describing the disease consequent to apoplexy. The local treatment consists in the application of irritants *over the origins, or courses of the nerves.*"

Now it is to be remembered, that the origin of both these sentences was once and only once delivered—*ore tenus*,—and we ask him whether it is possible, that two parties meeting for the express purpose of taking down notes of what another said, could differ so entirely, as do these two sentences, in the precise words actually used by the speaker on that occasion. Is it likely, that, in the very commencement of the speech, the words "Having spoken" could be converted into "I have already considered," or "we come now" into "I have now to direct your attention," or vice versâ? Is it likely, their station in the sentence would be so completely changed as they are here, as if the note taker was anxious only to take the effect of what was said, and waited till the sentence was complete, before he ventured to write it down. Every body knows, that a short-hand writer attends only to the words used, follows them with all the accuracy he is able, and departs from the exact phraseology when only the rapidity of utterance compels him to shorten the expression, but never, on any occasion, does he extend it, and therefore he never would be induced to convert "we come now" into "I have now to direct your attention." But passing over this, what shall be said if it can be shown, that the words printed in italics, in both sentences, were never used at all when the lecture was delivered, but that the words "nerves and their origins" were substituted by Dr. Stokes for the words "affected limbs," when he corrected the MS. for the press? Yet this was the fact. We could, if space allowed us, multiply instances of this torturing and twisting of sentences, and this adoption of expressions into the lecture, which were used for the first time by the lecturer, when he corrected the MS. for the press, and where they appear in his own hand-writing, either as additions, or in substitution for other words. But the most remarkable instance of this, one which goes furthest to show the true source of the lecture, as it is printed in Dr. Ryan's number, occurs where the lecture gives the method employed by Professor M'Namara in applying the moxa to paralytic patients. The whole of this sentence, as printed in our number, was added by Dr. Stokes, in his own hand-writing, when the MS. was before him, and from the circumstance of so important a sentence having been omitted in the notes of the gentleman who reported the lecture for us, (in whose accuracy we have with good cause the fullest confidence), we are satisfied that Dr. Stokes never mentioned that method when he delivered the lecture, or, if he did, certainly not at the length at which it is there given.

These facts, without more, would be sufficient of themselves to excite a violent suspicion.

But this is not all; we entreat the attention of our readers to a few other facts,

which go far to corroborate this suspicion, and almost to ripen it into conviction.

The number of Dr. Ryan's Journal in which this lecture of Dr. Stokes's was given was published on Saturday, 13th Sept. Dr. Ryan there says that the lecture was obtained from an "UNKNOWN FRIEND;" and he gives us a copy of a letter which came with the lecture. From the very limited number of subscribers Dr. Ryan has been able to detach from us, it is very probable this letter may have escaped the notice of our readers, and therefore we transcribe it.

"*Dublin, September* 2, 1834.

"Sir,—Having heard to-day from friends of yours in Dublin of the ungentlemanlike and unprofessional manner in which Dr. Stokes has acted towards you, by first promising and then withholding his lectures; and feeling, as I do, how grateful every Irishman ought to be to you for your unceasing and disinterested exertions in the advancement of the interest of your fellow-countrymen, I am most happy in being able to forward you a copy of his lectures, taken verbatim in short-hand. Motives of prudence prevent my avowing my name; but believe me to remain,

"YOUR UNKNOWN FRIEND.

"P.S. I send this with the lectures by a friend, who starts for London by the Holyhead Mail."

In his number which preceded this, viz.—Saturday, 6th September, the Doctor, in a notice to correspondents, says—

"*Dr. Stokes's Lectures.*—We are extremely glad to announce to our readers, that an unknown friend in Dublin has furnished us with a complete series of Dr. Stokes's Lectures, which were taken at the time of delivery. They reached us too late for insertion this week, but we shall commence with the continuation of those already published in our next Journal. These were taken in short-hand, and are verbatim. They were supplied to us, as Dr. Stokes, 'after repeated promises to furnish his lectures to Dr. Ryan alone,' has determined to supply them elsewhere."

Thus, it would appear, that the MS. of this lecture was received by Dr. Ryan in the week preceding the 13th Sept.; and, as it must have left Dublin on Tuesday the 2nd Sept., it would in due course have arrived in London on Thursday the 4th Sept., in ample time, with a little exertion, to have allowed of its appearance, *simultaneously* with the authorised copy of the same lecture, which was published in our Journal of 6th Sept., a point of so much importance to rival journalists, that, placed in such a situation, there is no exertion we would not have made to have accomplished it. But the Doctor contents himself with the notice before alluded to, and his readers are left to suppose that the MS. lecture is safely locked up in his desk, and would appear in the next number, and which it accordingly does. Now it is to be remarked, that the appearance of an authorised copy of Dr. Stokes's lectures in our Journal of the 6th Sept., was an event which Dr. Ryan had every reason to expect; because, long prior to the 6th, he knew Dr. Stokes's determination with regard to the publication of his lectures; and, moreover, was aware of their value to us, and of how great importance it was that the series, commenced in this Journal, should be continued in regular succession.

All these circumstances, weighed and considered together, it might be said, that the publication of the lecture by us on the 6th Sept. was extremely opportune for Dr. Ryan, especially when the subject was viewed in connexion with the promises contained in his note in his number of the 6th Sept., and it might thence be inferred—*but of course with no degree of truth*—that the lecture of Dr. Stokes, which appeared in Dr. Ryan's Journal of

the 13th, was copied from the lecture which appeared in our Journal of the 6th. But far be it from us to say that Dr. Ryan would stoop to such a meanness,—far be it from us to imagine that the letter of his unknown friend was a fabrication; but, notwithstanding, we think we might with entire safety venture to challenge the Doctor to name his correspondent, or to offer proof of the reality of his existence. At all events, we are very happy to know that so clever a being as this unknown friend is to be found amongst us,—a being gifted far beyond ordinary mortals, endowed, as he appears to be, not only with the most uncommonly extraordinary accuracy, but, as it seems to us, with a power of discovering the faulty expressions of the oral lecture, and of knowing what words ought and will be used by the lecturer when he comes to correct the notes for the press.

More might be said, but what avails it to proceed further. Enough has been shown to call on Dr. Ryan imperatively to explain, or at once to give up the name of his unknown friend, or, at the least, afford some proof that he exists. If he fails to do this, the inference is inevitable; and we leave it to Dr. Ryan's own heart and feeling to suggest what that inference must be. From the bottom of our hearts we pity and forgive the Doctor; we feel he has been led away by bad advice, and are satisfied the course he is now pursuing gains him neither the commendations of his friends, nor, which is of still more importance, his own heart's approval. Unless we are mistaken in our estimate of his character, in which, though there may be somewhat to censure, there is still much to respect, we have given him matter for reflection that ought, and will, we doubt not, be the cause of a regret to him, that shall approach near to the bitterness of remorse. We are sorry to cause him so much pain; but it is requisite to arrest him in his headlong course, and nothing but strong measures would be sufficient for that purpose. We trust and believe this will be enough, that he will be induced to recal his scattered senses, and consider well what he has done and what he is about to do. If he does, we have no fear for the result. On the other hand, if he will not reflect, if he will still persist in the errors of his ways, to disregard our property, invade our rights, and attack the characters of the gentlemen connected with us, he must be content to receive the just reward of such doings, either in scorn and contempt, or the well-merited punishment that he will have provoked.

Foreign Medicine.

Alcohol obtained from the dried Prune, after it has been injured by the Pyralis Pomana.

M. Dize, in the Journale de Chimie Médicale et de Toxicologie, states, that during the period of the republic, an immense quantity of dried prunes had been collected for the use of the army, and there not being a sufficient demand for them, they were laid up in the granaries of the Ecole Militaire, at Paris. While here, the insect called the pyralis pomana attacked them in great numbers, and soon reduced them to a friable, spongy state, and unfit for use. The saccharine principle was untouched; and as it was feared in those days to throw away such a quantity of the public property, the Minister for the War Office was considerably puzzled what to do with them. M. Dizé, who was then at the head of the central pharmacy of the army, proposed to distil a spirit from them, which might prove of use in the preparation of medicines. The prunes were accordingly placed at his disposal, and he obtained several barrels of alcohol at 33°, having, however, a slight taste of the nut, but not sufficient to prevent its employment in pharmacy. He considers that the nutritive part of the prune only was invaded by the pyralis pomana, the saccharine principle, from

which, of course, the alcohol was obtained, remaining intact. M. Dizé has here set an example of economy, which it would be well to follow; many other substances, now thrown away as useless, might prove of signal advantage. How often have the residua of chemical analysis proved of use.

M. Lodibert, the chief pharmacien of the military hospital at Gros Caill u, and a Member of the Royal Academy of Medicine, states that he has met with the same results in submitting to distillation a quantity of prunes, which had been rendered useless by a similar accident in the granaries of the military hospital at Strasburg.

Surgical Bazaar.

Under this whimsical name, an institution has been formed at Paris by M. Melecot, in the Rue Neuve St. Augustin, for supplying surgical instruments, &c., at a moment's notice. It is well known that accidents are daily occurring, requiring the use of certain instruments, stretchers, baths, &c., which, from the comparative rarity with which they are required, few surgeons think them needful to keep by them. To supply this deficiency, and, if we understand the system properly, to lend the necessary apparatus on payment of a certain sum, M. Melecot established this office. Government deemed it necessary to examine into the affair, and referred it to the Academie Royale de Médecine, which appointed forthwith a committee. This latter has given a very favourable report; it considers that the institution is one of those which deserves to be encouraged, and states that the instruments kept at the Bazaar are in excellent order. It recommends, however, that the office be placed under the direction of persons legally qualified, as are the herbalists, hernia bandage makers, dentists, &c., in order to be certain that the instruments are always in good condition.

Some such an institution would be of great advantage in this metropolis, where there are many surgeons who cannot be at the expense of a complete set of the necessary implements of their profession, or who are unwilling to go to such an expense, when it is very probable they will not have occasion for one-fourth; and we can scarcely believe it would repay its owner for his trouble and outlay.

Foreign Hospital Reports.

HÔPITAL DES ENFANS MALADES.

Synochus—Pneumonia terminated by Gangrene.

Louise Clememe, 11 years of age, who, for the last three years, had been residing in Paris, was on the 29th of April admitted into this hospital. Her friends stated that she had been ill for 12 days; when first taken, complained of pain in the head, was extremely dull, and suffered from pains in her limbs; for the first two days she was incessantly vomiting, but since then it had not returned; the fever continued violent, and with headach; she complained of a humming sound in the ears. Her abdomen became painful, and on the fifth day diarrhœa ensued; till this period her bowels had remained confined. These symptoms continued, and two days previous to her admission in the hospital, she was attacked with violent delirium, which in the evening became much worse. Bleeding from the nose supervened.

On the 29th, great prostration; the bleeding of the nose again recurred, when it became necessary to plug the nasal cavities; diarrhœa continued; and in the evening the delirium became urgent.

30th. Delirium continued nearly the whole of the night; this morning it was succeeded by excessive prostration; can lie only on the back; dulness of intellect; pain in the forehead; humming in ears more violent; lips dry; tongue parched; great thirst; has neither nausea nor vomiting; abdomen throughout its whole extent tender on pressure; bowels open; alvine dejections watery; skin hot and dry; pulse regular, 124; no cough or difficulty of respiration; and by percussion the whole of the thoracic cavity emitted healthy sounds. Gum water; leeches to the ileo-cæcal region; mustard poultices to the feet, and cold water to the forehead, were prescribed. In the evening the paroxysm of delirium became so violent, that the patient was obliged to be strapped in the bed.

May 1st. Countenance extremely anxious; face contracted; thirst so excessive that she was continually crying out "drink, drink." The least quantity of liquid taken into the stomach excited vomiting. The skin continued hot and dry; pulse small, very quick, 160 in

a minute; great flatulence; tenderness of abdomen worse than yesterday—cannot now even bear the pressure of the bed-clothes; vomiting incessant. Towards evening the vomiting subsided; the skin became bedewed with profuse perspiration; passed the night comfortably.

2nd. Pulse 132, regular; inspirations irregular, 32 in a minute; drowsiness, eyes closed; must speak several times to obtain an answer, and then she will only reply "yes" or "no;" countenance flushed; has not felt sick or vomited since yesterday; abdomen less painful on pressure; no stool since yesterday; cough dry and troublesome; sibilous sound distinguished by auscultation on the right side of the chest. Iced drinks, which were ordered on the 1st to be continued.

3rd. Vomiting; countenance much altered; abdomen very tender on pressure; pulse small and wiry, 140 in a minute; respiration more laborious; inspirations 36 in a minute. All symptoms of peritonitis supervened. Mercurial frictions were ordered to be applied on the abdomen. The next day all symptoms remained the same with the exception of vomiting. The right side of the chest was painful on percussion, from which issued a dull sound. A crepitation by auscultation was heard, occupying the two inferior thirds of the lung. The mercurial frictions were continued, and a blister applied to the affected side of the chest.

5th. Countenance of a violet hue; respiration laborious; inspirations 44 in a minute; pulse 144. She complains of acute pains in the abdomen and legs; crepitous rattle heard throughout the whole extent of the lung. Blister to be kept open; pectoral drinks.

7th. Yesterday all symptoms increased; the vomiting has returned; countenance exceedingly anxious; a tubular whistling heard throughout the whole of the right lung. On the left side a mixture of sounds is heard—subcrepitous, sibilous, &c.; cough dry and incessant; orthopnœa; pulse extremely quick, countless; inspirations 60; no expectoration.

8th. Dyspnœa and cough continue; has no pain, from violent inspiration, in the right side of the chest; however, the sound emitted from percussion is completely dead. Symptoms of violent inflammation of the right lung.

9th. Leaden hue of face; tongue and lips dry; cough as yesterday; no expectoration; continued dyspnœa; pulse 154; respiration 60; morbid sounds of chest as yesterday; intellectual powers natural. Parotid glands for the last two days have been enlarging, in consequence of which the mercurial frictions have been discontinued. Supported with wine and water; also injections of bark.

10th. The prostration became more urgent; breath extremely fœtid; pulse not perceptible; occasional vomiting; constipation. Medicines continued. On the 11th as M. Guersent was going round the wards the child died.

Necropsy twenty-three hours after death.—Head.—There was slight effusion about the base of the brain; nothing else remarkable was detected in this cavity. Thorax, the interior of the larynx, trachea, and bronchi, contained a coat of greyish matter, which exhaled a gangrenous odour. The mucous membrane lining these parts was pale, but some portions of that lining the bronchi were red, especially on the right side. Bronchial ganglions of the right side red, softened, and hypertrophied; those of the left, healthy. The internal surface of the right lung presented a blackish-grey tint. There were old adhesions of the pleura. The three lobes of this side were in a complete state of gangrene, and the odour exhaled characterised this condition. The heart and its appendages were healthy.

Abdomen.—No particular morbid appearance was detected in any of the organs of this cavity; the liver was large, and more red than natural; gall bladder contained its usual quantity of bile, which was of a greenish hue.

Caries of the Vertebræ—Sudden Death from Dislocation of the Neck—Complete destruction of the Left Occipital Condyle—Of a portion of the Atlas and Axis—Autopsy.

Josephine Lambert, 8 years of age, of scrofulous constitution, was admitted on the 24th of May, into this hospital, with the following symptoms; could lie only on the right side; tumefaction on the left side of the neck; puriform and fœtid discharge from the right ear; head inclined to the right side; all rotatory motions of the head destroyed; could not extend it backwards; acute and lancinating pain about the back part of the neck, increased by the slightest movement; progression difficult; legs, when in a state of repose, are not in any way affected; no spasmodic contractions, or paralysis; but at times in the superior

extremities experiences a sensation of numbness; complains of no other symptoms.

On inquiring into the cause and progress of this affection, her friends stated that, till 18 months since, she had enjoyed perfect health, and at that time she had a severe fall on her back. After this accident, she frequently would complain of pain in the dorsal region, and within the last eight months a gibbosity has formed, about two-thirds down her back. Since then, walking became difficult; her urine and fæces at times passed involuntarily, and within the last 15 days she has suffered from lancinating pains in the back of the neck; her head has become inclined to the right side; and its movements are extremely painful.

Issues were made on each side of her spine; symptoms continued till the end of June nearly the same; at times complained of numbness about the extremities; intellectual faculties remained good. On the 2nd of July, when apparently improving in health, as she was about rising in her bed, she suddenly expired.

Autopsy, 24 hours after death:—Brain.—Slight effusion in the ventricles, encephalic substance softer than natural, otherwise the brain and its meninges were healthy.

Back.—The lateral side of the neck tumefied; the cellular tissue indurated; but no change in the colour of the integuments. On the posterior and inferior part of the ear, before the mastoid process, a fistulous opening was observed, communicating with an abscess, occupying the posterior and superior part of the pharynx; in the centre of the tumour occupying the neck existed another abscess, which communicated with the left occipital condyle, which was entirely destroyed, so also was the occipito-atloidean ligament; slight caries of the internal part of the right condyle also existed; erosion of the superior face of the left lateral mass of the atlas; the corresponding arched side entirely denuded with superficial caries; dentiform process of the axis also in a deep state of caries. The whole of the cervical vertebræ were in a more or less state of caries, and the ninth was completely destroyed.

The spinal marrow was, through its entire course, healthy.

Nothing particular was observed, either in the thoracic or abdominal cavities.

British Hospital Reports.

ST. THOMAS'S HOSPITAL.

Effects from the Poison of Lead—Colic—Paralysis, &c.

Colic may be induced by various causes: it is a disease of frequent occurrence in the hospitals, and often met with in private practice. The effects of the morbid poison of lead on the animal system have been for many centuries observed, though at the present day its entire effects are not comprehended. This morbid poison, doubtless, when introduced into the animal economy, has its own peculiar characters and stages: the symptoms may be said to be primary and secondary. Some constitutions, owing to a peculiar idiosyncrasy, are more prone to its effects; for example, there are persons who, by only staying in a newly-painted room, are seized with both primary and secondary effects, and the disease is extremely violent. A case of this description is communicated by Dr. Badely, in the Medico-Chirurgical Transactions. A person, who had been six hours in a newly-painted room, lost all power of speech, and became paralytic, but who soon recovered after being removed from the impregnated atmosphere. Again, another individual might be in the employment of lead for a length of time, and then either be affected simply with colic, or this may afterwards be succeeded by weakness of the extensor muscles. A third may, for the whole period of his life, be in contact with this poison, yet not receive any injurious effect from it. Thus, it partakes of the general characters of poisons, and its effects are influenced by some peculiarity of constitution. It is curious to observe its primary and secondary effects; both at times supervene simultaneously, at others the primary symptoms alone are produced, and even reproduced many times from the same cause, without the secondary making their appearance; and, when the secondary symptom co-exists with the primary, it is in almost all cases more difficult and tedious to treat. It is also singular, that this poison should have such a peculiar effect over one particular class of muscles,—the extensors; but here, again, we can evidently observe, that poisons, according to their different natures, exert an influence over some one or other of the tissues of the animal economy; that, according also to their different stages, different medicaments are necessary, and a fact hitherto noticed to take place in other poisons is the same in this, the same medicine that will control its primary symptoms, will tend to increase or produce its secondary; and, if both diseases result at the same time, the drastics necessary for the one increase the urgency of the other; consequently, the treatment for one is diametrically opposite for the other, one being bleeding and purgatives, the other tonics and stimulants. The following

cases will show the symptoms and progress of the different forms of this disease.

Case I.—*Primitive Symptoms.*—William Dudley, of lymphatic temperament, a coach-painter, 20 years of age, stated for three days he had been suffering from severe pain in the umbilical region, which on sudden pressure was much increased; bowels for four days had been in a state of constipation. These symptoms when admitted were precisely as he had described; also now complained of rheumatic pains about his limbs, which in the arms were increased by cold, but in the feet and legs rendered aggravated by heat. Calomel and croton oil were administered, several doses of which he took before his bowels became freely opened. In the evening he passed several stools; fæcal matter hard and lumpy. On the 28th he was much better; the pain in the umbilical region had nearly subsided. On the 30th there was slight tendency to constipation, for which Dr. Elliotson, under whose care he was admitted, prescribed six drams of castor-oil to be taken daily, and by the 10th of July he became sufficiently well to leave the hospital.

Case II.—*Primitive and Secondary Symptoms.*—John Barry was admitted into Jacob's Ward also by Dr. Elliotson. He was 22 years of age, of unhealthy, meagre appearance, and stated that he had been ill five weeks. When first attacked had severe pain about the umbilical region, much cramp of the abdominal muscles, dimness of sight, with loss of power of the extensor muscles of the wrist, and slight pricking pains in the arms and legs; for the last twelve days his bowels have not acted. At the time of admission all the above symptoms remained, with the exception of the dimness of vision; soon after his entrance he passed a hard lumpy stool. He experienced much relief from warmth applied to the abdomen. Complains of shooting pains in the arms, and says they extend to the extremities of the fingers; tongue white; no appetite; pulse natural; skin rather dry. Ten grains of calomel with two of opium were immediately administered, with a drop of croton oil, which was to be repeated every three hours until the bowels had freely acted. This medicine was repeated six times, after which copious evacuations were obtained. On the 26th, two days from his admission, he was greatly relieved; his bowels continued in a state of relaxation. Both hands were partially closed from the loss of power of the extensors. A blister was applied to the left wrist to see the effect of counter-irritation. Six days afterwards all colicky symptoms had subsided, but the loss of power in the wrists remained much the same; a blister was now also ordered to be applied to the right wrist. On the 10th, the bowels again became costive; tenderness of the abdomen returned. Croton oil was again administered, and mustard poultices were applied to the abdomen. Up to the 22nd two or three evacuations were daily obtained; the medicine had been discontinued for two days. Diarrhœa to-day supervened, accompanied with spasms of the abdominal muscles. One grain of the extract of stramonium was administered three times a-day, and blisters were again applied to the wrists. From this time to the 1st of May he gradually improved; his wrists gained power; has used splints for some time, so as to support the extensor muscles, and on the 8th of the month he left the hospital quite well, with the exception of slight debility in the wrists, which, however, he could use with comparative ease.

Case III.—*Colic and partial Paralysis of the Extensors.*—James Willis, aged 46, admitted by Dr. Roots into Luke's Ward, states he has been ill for six weeks, attacked with vomiting, constipation, and pain in the umbilical region. The vomiting continued for the first week, and has not since recurred. At the present time he complains of pains in the back, legs, and shoulders; pulse 116, tolerably firm; tongue coated with whitish mucus; urine high-coloured. The extensors of the ring and middle fingers in this case were only affected; even this was confined to the right hand. Calomel and castor oil in this case were found sufficient to overcome the colicky symptoms; and, for the rheumatic pains, the ammoniated tincture of guaiacum was administered, as they were of a non-inflammatory character. After remaining in the hospital some time, the colicky symptoms had entirely subsided, and he had gained some power over the extensors, when he took it in his head to walk out of the hospital.

Case IV.—*Paralysis.*—Thomas Scott, of delicate appearance and lymphatic temperament, who for several times had been the subject of colic, and three years since was under Dr. Williams for paralysis of the extensors of the wrist, from which he got perfectly well. Two months ago he was again attacked with colic, after which symptoms had subsided, he lost all power again of the extensor muscles of the wrist-joint; for this he was admitted into the hospital, when he complained of no other symptoms. Dr. Roots put him upon a nourishing diet, and ordered one-sixth of a grain of the sulphate of strychnine three times a day. A few days after taking this medicine, he observed a tingling and pricking sensation in the affected portions of the arms, which was succeeded by slight catching of the muscles. By the 20th he thought he had obtained a little more power; the strychnine had been increased to one-fifth of a grain, the twitchings became more violent, and the medicine was decreased to twice a day. By the 24th, slight cephalalgia was induced; the twitchings became more powerful, and he continued to gain more power over his affected limbs. Leeches and cold lotions were adopted to counteract

the cerebral symptoms. The strychnine now was discontinued. Strong iodine ointment was rubbed on the arms, and carbonate of iron, administered. Up to the present time he is taking this medicine. Although there is increased power of the extensors, yet he is unable to extend his hands, which are kept supported by splints.

There has been, during the last year, many cases that have been benefited by the use of strychnine; electricity also has been successfully used in a variety of cases. However, for some reason or other, the use of this latter remedy has been prohibited by the treasurer; whether the instrument is too expensive or not for the hospital funds, we cannot say, but we must assert, that in such an extensive building as St. Thomas's Hospital, we are somewhat surprised that such a useful remedy should be expelled, when there are a number of patients admitted into it daily, that might reap great benefit from its use.

WESTMINSTER HOSPITAL.

Extensive Ulceration of the Face.

Joseph Welsford, ætat. 54, a native of Devonshire, residing at No. 14, Belvidere-road, Lambeth, was admitted as an out patient Aug. 29th, 1833, under Mr. Guthrie. Of sanguineous temperament, short, stout, and thick-set: a tailor by trade. Admitted for an extensive ulceration of the face, involving the nose, part of the forehead, the cheeks, and upper lip; the nares destroyed, the septum bare. The openings of the nasal meati on each side, and the neighbouring parts, especially the floor of the nose, and the inferior fimbriated bones, lined with the Schneiderian membrane, are completely visible, and there is an opening in the left antrum about the size of the tip of the little finger. The ulceration affects the soft parts from the whole margin of the upper lip (which is almost eaten away) up the cheeks on either side, exposing the bones, passing by the inner canthus of each eye, affecting the eyelids, and extending laterally on the forehead to about half the length of the eyebrows, exposing the bone here and there. The only remnants of the nose are the bones and septum, covered with their membrane. The ulceration is in some parts deeper than in others: it extends more on the right side of the forehead than on the left, and the right frontal sinus is exposed by ulceration; the right eye is also affected by an extension of inflammation; both are weak, but free from the ulceration; the upper lip is ulcerated throughout its whole length to within a third of an inch of the buccal edge. The whole extent of this enormous ulceration has a glassy pink hue, and is plentifully bedewed with a muco-purulent discharge.

The disease commenced one-and-twenty years ago, in consequence of a slight scratch across the nose which he received in a fight; at least, such is the cause he assigns for it. This scratch scabbed, and remained so for four years; it then became larger and ulcerated; he had medical advice, but it was six months before he was cured. This apparent relief lasted but a short time, for he soon caught cold, and the ulceration commenced again in a fortnight, and kept on slowly but steadily increasing for seven or eight years, when one day while stooping, the nasal artery was ruptured, and hæmorrhage to a considerable extent ensued; it was arrested by the application of cold. About four years ago, the ulceration extended to the nares. He is unable to give the dates when the different parts became involved in the disease. He has not suffered pain from this complaint until within the last three or four months, since which he has been subject to a dull aching pain in the part, which occasionally becomes lancinating; bleeding takes place from it occasionally, but not to any great extent; is not aware that any exfoliation of bone has taken place. Has used the Bath waters, but without advantage. About a year ago he was a patient at Guy's, where he attended eight months: he was salivated there, and he thinks that, far from doing him any good, it produced injurious consequences.

Had the venereal disease thirty-five years ago, fourteen years before the scratch on the nose was received; he was then salivated for a fortnight, and told that he was quite cured. Is a married man, and has had several children.

Ordered to have the ulceration dressed with the ung. œruginis spread on lint, the eyes to be guarded from its effects by dossils of lint placed at the inner canthi.

℞. Decoct. sarsæ. lb. j.; extr. sarsæ. ʒss.
Solve. Fiat mistura in die sumend.

℞. Pil. hyd. subm. c. gr. v.; fiat pilula, alternâ die sumend.

Among the patients and underlings of the establishment he was familiarly called "*the man with the awful face.*"

31st. Mr. Guthrie and Mr. White saw him to day, and could not consider the disease syphilitic, but rather thought it a species of lupus or noli me tangere. The man thinks the ointment has done him good; smarts him considerably. The edges of the ulceration look healthier. Ordered to continue, and bathe the parts twice a-day with a solution of the chloride of lime.

Sept. 2nd. Thinks himself improved; is dressed daily, but has not used the chloride; says he is subject to a dry, scurvy state of the skin in winter, which he thinks may have some connexion with his complaint.

14th. The lip appears as if inclined to heal; the ung. nit. is applied in different parts to the edges of the ulceration.

21st. It appears to be spreading near the lip; Mr. Guthrie, therefore, ordered the application of the ung. hydrargyri oxymuriatis*

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* ℞. Hydrargyri oxymuriatis, ʒjss.;
Ung. ceti, ʒj.—Fiat unguentum.

to the edge of the ulcer along the lip, and part of the cheek on either side, in order to destroy the unhealthy surface, and produce one of a healthy character. The adjacent parts intended to remain intact are to be defended by thick layers of strapping. As it was expected that the application of this unguent would cause considerable inflammation, he was recommended to become an in-patient for a few days. For this he required a day's consideration, and finally decided against it. The ointment was accordingly applied, he remaining an out-patient.

28th. Reports have been rife concerning this man, but to-day is the first time he has been seen at the hospital by the students. He says he kept the ointment on for twenty-four hours, the first ten of which he was in constant agony. In the evening of the day in which the ointment was applied, he sent for the house-surgeon, to say that he was going mad with pain, and he attended early next morning with tremendous tumefaction of the face and head. This continued for two or three days, and then gradually diminished. The parts covered by the ointment were destroyed, and have nearly entirely sloughed away.

Oct. 4th. The sloughs have entirely separated; the reflection of the inner membrane from the upper lip to the gum is destroyed; the lip is only connected to the rest of the face at either angle; it looks, however, rather better than it did.

11th. The sore has been dressed for the last few days with a lotion (if it may be called so), consisting of a drachm of the oxymuriate of mercury and three of distilled water; it causes great pain, and he cannot bear it any longer.

Nov. 1st. The face has improved very much latterly, under the use of the ung. œruginis, and the ulceration is evidently smaller; he will not now use any other application than simple dressing, and consequently gives up his letter.

APOTHECARIES' HALL.

Names of those gentlemen to whom the Court of Examiners granted Certificates of Qualification, Thursday, Sept. 11th.

Samuel Fereday Bagley	Dibdale House, near Dudley.
John Bolton Hodgson	London.
Joseph Hudson	Cumberland.
Samuel Sandys	———
John Taylor	Huddersfield.
Henry Thorp	Barnsley.
T. K. Lamb Walker	Huntingdon, near York.
Wm. Haythorne White	Chester.
James Whitehead	Oldham.

BOOKS FOR REVIEW.

A Treatise on that Affection of the Joints denominated Arthritis or Gout. By Lewis Leese, M.D., M.R.C.S., &c. Pp. 48. Highley. 1834.

Cases of Tic Douloureux, and other forms of Neuralgia. By John Scott, Surgeon to the London Hospital, &c. Pp. 52. Longman. 1834.

CORRESPONDENTS.

Press of matter compels us to omit Mr. Bainbridge's Essay, with wood-cut.

Dr. W.—This communication in our next.

Our Paris Correspondent.—M. Lisfranc's clinical lecture has been received.

Mr. G's paper shall be inserted.

W. L.—The case would be inserted, if compressed to our limits.

R. B.—We recommend him to attend to the rules of grammar before he favours us with any other article.

METEOROLOGICAL JOURNAL.

MONTH. Sept., 1834.	Moon.	Thermom.			Barometer.		De Luc's Hygrometer.		Winds.		Atmospheric Variations.		
11	☽	62	65	56	29·51	29·54	77	80	S.S.E.	S.	Cloudy	Showy	Fine
12		61	64	50	29·84	30·00	78	76	S.W.	S.W.	Fine	Fine	———
13		60	63	51	30·16	30·18	75	69	N.N.E.	E.	———	———	———
14		55	62	49	30·16	30·14	69	71	E.	E.	———	———	———
15		57	63	52	30.07	29·95	72	73	E.	E.	———	———	———
16		59	68	59	29·75	29·75	75	76	E.	E.S.E.	Cloudy	———	———
17		66	73	62	29·75	29·75	78	74	S.E.	S.	Fine	———	———

50, *High Holborn.* William Harris and Co.

All Communications and Books for Review to be forwarded (free of expense) to the Publisher, 356, Strand, near King's College.

THE

London Medical and Surgical Journal.

No. 139. SATURDAY, SEPTEMBER 27, 1834. Vol. VI.

LECTURES ON THE THEORY AND PRACTICE OF MEDICINE,

BY WILLIAM STOKES, M.D.,

Delivered at the Medical School, Park Street, Dublin.—Session 1833–34.

LECTURE XXXIV.

Principles of Treatment of Neuralgic Affections—Connexions with Organic Disease—Symptoms and Treatment of Hemicrania—Use of Iron, Quinine, and Opium—Endermic Method of using Opium—Tic Douloureux—Opinions of Sir C. Bell—Inflammation of Frontal Sinuses—Mr. Crampton's Treatment—Affections of the Fifth and Seventh Nerves in Cases of Cerebral Disease—Neuralgia of the Side—Researches of Lombard and Brande on the Effect of Nitrate of Silver.

Gentlemen,—To-day I purpose to speak of some of the general principles connected with the treatment of neuralgic affections; and here I beg leave to remind you, that we mean by neuralgic affections an exaltation of the nervous sensibility independent, *quoad* its production, of any organic disease *which we can detect* in the nerves, brain, or spinal cord. There is no proposition better proved than this, that the phenomena of nervous affections are not the same as those of inflammatory diseases; every thing tends to prove it, whether we look to the history and symptoms of the case, the results of treatment, or the appearances seen on dissection.

As the nervous system is diffused all over the body, and as there is no part of the system which does not, under certain circumstances, exhibit indications of sensibility, it follows that we may have neuralgic pains in any of the component tissues. Still, it is remarkable, that neuralgic affections are much more frequent in some parts than in others; and we find, that of all parts of the nervous system, the superficial nerves are those which are most commonly affected. With respect to the nervous affections of the viscera, we know very little as to their exact seat, but it has been generally observed, that the pain is situated in the situations of the plexuses of the great sympathetic.

In entering on the principles which should regulate the treatment of neuralgic diseases, I have to remark, that they are but slightly modified by their situation; in fact, it may be asserted generally, that the same principles of treatment apply, no matter where the disease may be situated. But are we to consider this subject as totally apart and having no connexion with the occurrence of inflammatory or organic disease? If we did so, we should get but a limited and erroneous view of the matter. I have told you before, that, in long-continued cases of functional disease, organic alterations were very apt to take place. The reverse of this proposition also is true, that organic affections may precede an attack of nervous symptoms; in other words, you may have cases presenting, at first, phenomena amenable to antiphlogistic treatment, and yet a period will arrive when new symptoms occur, and this mode of treatment will be no longer applicable. This is of importance in the practice of medicine, for if, in such a case, you persevere in the use of depleting measures, you will effect nothing towards the removal of distressing symptoms, and may do your patient's constitution much injury. A common example of this is, where a person receives some local injury, as for instance, a blow on the cheek. This is followed by all the symptoms of inflammation, as pain, swelling, heat, redness, &c. Well, then, you have a case of local inflammation to deal with, and you must treat it as such. But a period may arrive when the heat, swelling, and other symptoms of an inflammatory affection subsiding, the pain alone continues. Here the pain may be purely nervous; and if you were to go on leeching, purging, and depleting your patient, you would not only lose your time, but, in all probability, do mischief. Here, as in many other cases, we have local inflammation followed by an active neurosis. You remember, when speaking of hepatitis, I remarked that many persons were subject to pains in the region of the liver, *independent of any known organic disease.* I also drew your attention to the fact, that after

the symptoms of a hepatitis are removed, the pain sometimes continues, having no longer any connexion with organic disease, and taking on the character of a neurosis. You will see of what importance this is when you reflect on the mischief done to such patients by persevering in bleeding, blistering, and the use of mercury, when the disease is amenable, not to this, but to a plan of treatment calculated to remove the neuralgia of the liver. It is the same thing with respect to the mammæ, injuries of which are frequently followed by severe neuralgic affections. In the case of the heart, it sometimes happens that, after an attack of pericarditis, the patient will be subject to pain in that region, which may continue for years. Dr. Bright gives a very remarkable case of neuralgia which supervened on the disappearance of a cutaneous affection. All these facts tend to show, *that the mere pre-existence of local inflammation in any individual case does not prove that the pain is not neuralgic*, and hence it is plain, that in such a case it might be improper to persevere in the treatment used for local inflammation. This persisting in the taking of a neuralgic pain for the continuance of inflammatory or organic disease is a common error, and often productive of the most frightful consequences. Without a careful consideration of such cases, you will fall constantly into error. Never forget that although neuralgia may be the first and sole affection, yet, that it is often combined with organic disease, which it may precede, accompany, or follow.

One of the most common forms of neuralgia, which you will meet with in private practice, is what has been termed *Hemicrania*, the chief symptom of which is violent pain in one side of the head and face. The symptoms are exceedingly violent; there is a high degree of exaltation in the sensibility of the surface of the face; the eye is exquisitely sensible to light, and the ear to sound. The patient is very much prostrated, and his spirits depressed, and the slightest cause is sufficient to bring on an attack of pain. In some cases the pain is constant, in some remittent, in others intermittent. The sensibility is deranged only at one side of the head and face, and the pain seldom extends beyond the median line. As far as we know of this affection, it seems to depend on some morbid state, either of the sentient extremities of the fifth nerve, or of that portion of the brain which receives its impressions.

In cases of hemicrania we may have symptoms existing elsewhere, and this leads us to the consideration of the exciting causes. These will be often found to depend on deranged digestion. Here the irritation is reflected through the sympathetic system to the brain and sentient branches of the fifth pair, for there exists between these two nerves a very close and remarkable sympathy. Thus we frequently observe, that tic douloureux, as well as hemicrania, are the result of some injury or irritation of those parts to which the ganglionic nerves are distributed. In treating a case of hemicrania, then, you must inquire whether there be any visceral irritation present, and remove it as soon as possible. You must also carefully inspect the teeth and gums, for a carious tooth, or a diseased gum, will prove the exciting cause of an attack. I have seen many cases of hemicrania where the patient was subjected to a variety of treatment without success, and where complete relief was obtained by the simple process of extracting a carious tooth. It is a very curious fact, that in those instances the pain was referred, not to the diseased tooth but to the whole surface of the face. Cases of this kind are given, in which the pain lasted for many years, resisting every form of treatment, and were afterwards cured by the extraction of a decayed tooth. There is one circumstance in these cases which is very apt to mislead, and this is, that the pain is often not referred to the tooth; and relief, to a certain extent, is obtained by the use of narcotics and carbonate of iron. This, however, should not lead you to think that the disease has no connexion with the state of the tooth and gum; and this fact is illustrative of a most important principle, viz., *that temporary relief by a purely anti-neuralgic treatment does not prove that no organic origin exists.* How often has hysteria depended on local disease, and the practitioner been misled by the temporary relief afforded by antispasmodics. I have seen the most melancholy examples of this, and have more than once been misled myself.

With respect to the remedies most generally employed in the treatment of hemicrania, they are chiefly preparations of arsenic, iron, sulphate of quinine, and opium. Of these, the recently precipitated carbonate of iron appears to be the best, indeed, its success is frequently heroic. In proof of this you will find several very interesting cases detailed by Mr. Hutchinson in his excellent work. The best way of giving it is to combine it with an aromatic and a laxative; a small quantity of the pulv. cinnamomi comp. a few grains of rhubarb, and fifteen grains or a scruple of the carbonate of iron, will form a powder which may be given two or three times a day with advantage. It has been asserted, that the carbonate of iron is suited for fixed, and not for intermittent cases of neuralgia; I have found the contrary to be the fact. I had lately a lady under my care, who, in attempting to remove some furniture, received an injury by striking her cheek against a chest. She was treated for six weeks with purgatives, local bleeding, and mercury; the swelling, heat, and redness of the part went off, but the pain remained, being regularly intermittent, and occasionally very severe. This lady was perfectly cured by a tonic regimen, and the carbonate of iron, in scruple doses, three times a day. The sulphate of quinine has been proposed as being pecu-

liarly adopted for intermittent cases; it will sometimes succeed, but I have known several cases where it completely failed. I grant that the character of intermission would naturally induce a practitioner to have recourse to it, but I have known so many instances of its failure, in purely intermittent neuralgia, that I give a decided preference to the carbonate of iron; I recollect the case of a gentleman who for six weeks had daily attacks of terrible hemicrania. When the attack came on, he was obliged to remain perfectly motionless, the tears streamed from the eye of the affected side, the ear was exquisitely sensible to the slightest sounds, and he remained in a state of intolerable suffering for some hours. For the space of six weeks he took quinine *in enormous doses* without any improvement, and was ultimately obliged to give it up as useless. I have seen the same result in a great many cases, and as far as my experiences goes, I would not place much reliance on quinine, even where the attack was of a purely intermittent character. I have seen some cases indeed, where it has done good, and you may try it; but if after three or four full doses, you find there is no improvement, you may be almost sure that it will prove useless. When it succeeds, one of the first effects produced by it is to put back the paroxysm for an hour or two, just as occurs when it is successfully given in a case of ague. But I feel certain, that if it is likely to succeed, its beneficial effects will be seen in the course of a few days, and to persist for weeks in using it is not only unnecessary but improper. In the very remarkable case to which I have just alluded, the gentleman after having tried quinine without the slightest improvement for six weeks, was suddenly and completely relieved by a full dose of opium. At night, on retiring to rest, he took a strong opiate, awoke in the morning refreshed and free from pain, and has continued from that time to the present (a period of ten years) without any symptom of hemicrania. Dr. Mackintosh says that the sedative solution of opium, or the acetate of morphia, are the best remedies for this disease he is acquainted with, and that he has seen many cases where they succeeded, after every thing else had failed. You may also employ in such cases the external use of narcotics with great advantage, of which one of the best is the extract of belladonna. If you prescribe a liniment composed of a drachm of the extract of belladonna, with an ounce of the compound camphor liniment, you will have a powerful remedy, and one, which when applied to the surface of the affected parts, will often produce great relief. I have sometimes used the acetate of morphia in the endermic mode, by putting on a small blister, and leaving it on until vesication was produced, when the raised cuticle was cut away with a pair of fine scissors, and the surface dressed with an ointment composed of a drachm of lard, and from a grain to a grain and a half of the acetate of morphia. I remember two cases of intermittent hemicrania which yielded to this treatment. You will also frequently derive benefit from the internal use of stramonium and belladonna. There are many other remedies used for this purpose, but I shall not detain you any longer on this part of the subject; it will be sufficient to remark that the carbonate of iron, sulphate of quinine, and opium, externally and internally, are the remedies on which the most reliance is to be placed.

We have now, gentlemen, to consider one of the most painful affections to which man is subject. This affection has been generally considered under two points of view, either as functional or organic. The functional, as far as we can judge of it, appears to be a pure neurosis; in the organic it is supposed that the disease is connected with an organic affection of some part of the brain; of these the first kind is that most commonly met with in practice.

Tic douloureux is one of the most melancholy and harassing affections to which the human frame is liable; in some instances the poor sufferer, after having lived for years in a state of exquisite misery, is at last worn out by the intensity and persistence of his agonies. Such was the fate of the late celebrated but unfortunate Dr. Pemberton. A great deal of light has been thrown on the nature of this affection by the researches of Sir Charles Bell. He seems to have succeeded in establishing several points connected with the nature and seat of this affection, one of the most important of which is, that the seat of this disease is in the sentient branches of the fifth pair of nerves, and not, as it has been supposed, in the portio dura. He has shown pretty clearly that the portio dura is the nerve which regulates the muscular motions of the face, producing all those modifications of features which we call expression, and also peculiar motions or changes connected with certain states of respiration, in a word, that it is the expressive and respiratory nerve of the face. It is, according to him, never the seat of tic douloureux, and the practice of dividing it for this complaint, is as unscientific as unsuccessful. The division of the portio dura in such cases, not only fails in giving relief, but also entails disgrace on the practitioner, and disfigurement and misery on the patient. *Its effect is paralysis of the muscles of one side of the face, and great distortion*, without the slightest relief. Yet it is a melancholy fact that such operations have been performed. Sir C. Bell's researches, however, have put an end to this malpractice, for he has shown that the fifth nerve is that which supplies the face with sensation, and that it is in its branches the disease is situated. We are then, I think, to look upon this disease as a neurosis situated in the expansions of the facial branches of the fifth pair of nerves. Sir C. Bell relates a very remarkable case, in which the patient had suffered from a series of dreadful attacks, the pain

coming on in violent paroxysms. From the accounts given by this patient, and from personal observation, he says, that one could trace with anatomical precision the course and direction of the branches of the fifth nerve, for on the recurrence of an attack of pain, he applied his fingers to his face, and made pressure on the foramina where the different branches of the fifth nerve issue. Having done this, he would press the nerves with all his force, and remain in a fixed posture while the paroxysm continued.

Sir Charles Bell's idea with respect to the cause of this disease, is, that it generally depends on some visceral irritation reflected through the sentient branches of the fifth pair of nerves.

I have told you that this disease is one of the most melancholy affections to which man is subject, it is also one of the most obstinate. A vast number of remedies have been employed or proposed for its treatment, and this affords an illustration of the fact, that the more incurable a disease is, the more extensive is the list of its remedies. A few only are deserving of attention, and these I have already mentioned when speaking of hemicrania, namely, the preparations of arsenic, iron, quinine, and opium. Where these fail after a full trial, Dr. Bright looks upon the case as hopeless. Narcotics in every form and of every description have been employed both externally and internally, but to all these the same remark applies; many of these remedies will give temporary relief, and the physician will flatter himself on the prospect of a favourable termination, but in a short time he is annoyed at finding that the disease has returned and left the patient as bad as ever. Many a time have I seen a poor sufferer excited by hope on receiving temporary alleviation from the use of arsenic or iron, and sinking into despair, when he found that his torturing malady returned, and that the remedies which on the first trial gave relief, on a second proved useless. The general principles which should guide you in your treatment are, first, to investigate carefully whether any visceral irritation exists, and remove it as far as possible, taking care at the same time to improve the general state of the patient's health, and the next thing is to allay the sensibility of the nerves of the part and avoid all exciting causes. In certain cases this disease appears to be connected with an affection of the brain, and this seems to be an explanation of the fact before mentioned, that in some cases, where all specific treatment had completely failed, relief has been obtained by shaving the head and applying ice to the scalp during the paroxysms. I have already mentioned to you a case in which this mode of treatment proved eminently successful. This is a curious fact, and one which being of practical importance, you should hold in memory.

We have a form of disease consisting of violent paroxysms of pain, apparently nervous, and in which no doubt the branches of the fifth pair of nerves are engaged; it is generally found to depend on a local cause, being connected with some disease of the bones of the face or skull, and bears a close analogy to tic doloureux. I have now witnessed several instances of this disease; in some cases it is produced by a carious tooth, in others by disease of the maxillary bones, and I have observed it to occur in one case of abscess of the antrum. The same thing has been observed by Dr. Bright, who gives a case in which the extraction of one of the bicuspids was followed by a gush of matter from the antrum and complete relief of the violent pain. I have also seen cases in which this affection appeared to be the result of disease of the lining membrane of the frontal sinus, of this also Dr. Bright gives an example. The case I witnessed was that of a lady, who got a dreadful attack, resembling hemicrania, in consequence of being exposed to cold shortly after leaving a warm climate. She suffered the most violent agonies for some time, until one day she had a discharge of purulent matter from the nostrils, which was almost immediately followed by relief. This has recurred at intervals since that period, the pain ceasing when the discharge comes on, and returning when the discharge goes away. The pain is most intense, and situated in the direction of the frontal sinus, and running down along the side of the face; it is constant, and without any intermissions, returns upon the occurrence of any cause which checks the discharge, and is sometimes so excessive as to render her quite frantic. Whenever an attack comes on, she applies a number of leeches over the frontal sinus, then warm fomentations, and this has the effect of bringing on the discharge and giving relief. In a conversation which I had with Mr. Crampton on this case, he stated to me that he had met with two similar ones, and that he had succeeded in accomplishing a perfect cure by inserting a large caustic issue over the top of the head. I accordingly advised my patient to have the same thing done. She has since that time left this country, but previous to her departure I certainly observed an improvement in her symptoms, and the principle of treatment appears to be perfectly rational.

This leads us to consider some affections of the sentient and motor branches of the 5th pair of nerves, in which the disease is connected with an affection of the brain. A very interesting and important case bearing on this point is given by Sir Charles Bell, which I shall briefly relate. The patient, a lady, had remarked, that for twelve months before the case began to assume a serious character, she felt an unusual sensation in the tip of the tongue, towards the left side, as if it had been burned. This sensation gradually extended over the whole of the left half of the

tongue, the left half of the palate, gums, and face, accompanied by an almost total loss of proper sensation in the parts affected. The sensation of heat and uneasiness was increased by the least motion of the face, the application of her hand, and other trifling causes. This case was communicated to Sir C. Bell by Dr. Whiting, under whose care it was. She had paralysis of the buccinator of the affected side, and the morsels of food had to be removed on that side with the finger, so that she was obliged to perform mastication with the opposite jaw alone. The motions of the face, however, were properly performed, showing that the functions of the superficial branches of the portio dura were unimpaired, and the temporal and masseter muscles continued in their natural state. Her general health also was pretty good, and she complained of nothing but the affection of the side of the face, tongue, and palate, and the impossibility of masticating her food with comfort on the left side, in consequence of the state of the buccinator. Some time afterwards, while engaged in eating, she found that a new train of symptoms were in progress; her face became distorted by the retraction of the mouth to one side, the masseter and temporal muscles of the left side ceased to act, the tongue became protruded, with its tip directed to the left side, hearing ceased on the same side, she had some difficulty in performing the motions of the eye, and the eyeball began to waste and diminish. About a month before her death, she became quite stupid, and spoke very indistinctly. She died after the disease had continued for two years.

Here was a case, presenting in the first instance symptoms of a nervous affection of the left side of the face, tongue, and palate, unaccompanied at that time by any paralysis of the muscles of the face. About a year afterwards, however, she began to exhibit symptoms of paralysis of that side affecting those muscles which are supplied by the branches of the portio dura and fifth nerve. Expression was now lost, the temporal and masseter muscles ceased to act, the mouth was drawn to one side, and the tongue protruded. In addition to this the sense of hearing on one side was lost, and the globe of the eye began to waste. On dissection it was found that a tumour, appearing to be a morbid growth from the left crus cerebri, about the size of a pigeon's egg, and containing some fluid, was situated over the left temporal bone. This production was partly cellular and partly membranous. But the most interesting part of the case was the examination of the state of the nerves. The first and second nerves were undisturbed, and so was the fourth. The third was slightly displaced; but it was on the fifth that the principal impression seemed to have been made, for it was flattened, thin, and wasted, as if from the direct pressure of the tumour. The sixth nerve was uninjured. The seventh was involved and lost in the tumour, from within a quarter of an inch of its origin as far as the meatus auditorius internus. Here is a drawing of the case; here is the fifth nerve flattened and wasted, and here is the seventh involved in the tumour.

Mr. Stanley gives a case very similar to the foregoing, of which I shall give you an abstract. The patient had hemiplegia of the left side, without loss of sensation in the affected arm or leg, but in the left side of the face there was a complete loss of sensation and motion. The loss of sensation and motion in this case would argue that there was an injury of the seventh nerve as well as the fifth. The mucous membrane of the left nostril was red, and there was opacity and disorganisation of the cornea of the left eye, with total loss of hearing on the same side. The patient died some time after the paralytic symptoms were established. On dissection, a tumour was found lying close to the tuber annulare, and compressing the fifth and seventh nerves.

Here was a case in which there was hemiplegia of one side, and complete loss of motion and sensation in the corresponding half of the face, with an erysipelatous redness of the nostril, inflammation of the conjunctiva, and disorganisation of the cornea. It is a curious fact, that, in cases where the sentient branches of the fifth nerve which are distributed to the face become affected, the eye is frequently disorganised. The cause of this appears to be that the eye, under such circumstances, loses the sensibility of its external surface, which is supplied by the branches of the fifth pair, and is intended to obviate and guard against all causes of irritation, and is consequently left in a state in which it can no longer protect itself from external injuries. In a case of this description which came under the notice of Mr. Crampton, the finger could be rubbed over the eyeball without giving the patient any pain, and there was chronic inflammation of the conjunctiva.

The principles which should guide us in the treatment of neuralgic affections of other parts of the body are the same as those which have been laid down in speaking of the neuralgic affections of the face. You will often meet with affections of this nature in females: they are situated generally in the right or left side, and are frequently, I regret to say, mistaken for cases of local inflammation. I have already dwelt on the disastrous consequences of mistaking a neuralgia of the liver for hepatitis, and showed the mischievous consequences of treating it with purgatives, leeching, blistering, and mercury. There is an analogous affection of the left side, which has frequently been mistaken for disease of the heart, and treated accordingly, It is most commonly observed in females of a nervous habit. To this affection the same principles will apply as to hepatic neuralgia; by regulating the patient's general health, prescribing a mild nutritious diet, giving up all antiphlo-

gistic measures, and the judicious employment of tonics and narcotics, you will be able to effect a cure.

It has been lately proposed to use the nitrate of silver in the treatment of cases of this description, from its success in epilepsy. A very interesting memoir on this subject has been recently transmitted to me from Paris by Dr. Lombard, in which he dwells on the utility of the nitrate of silver in several nervous affections. Some persons, but in particular the disciples of the physiological school, think, that nitrate of silver relieves cerebro-spinal irritation by creating a new irritation elsewhere; that its efficacy consists in its causing a revulsion of the gastro-intestinal mucous membrane; and that thus we cure an epilepsy by substituting a gastritis. In proof of this they bring forward cases where a chronic gastritis was found to supervene on the removal of an epilepsy by this remedy. This, however, is by no means a fair or logical deduction. The epilepsy might have been preceded and produced by the chronic gastritis, though the symptoms of the latter were not recognised, owing to the existence of other symptoms of a more prominent and striking character. The gastritis might have had a priority of existence, and might have been the cause of the epilepsy; the epilepsy might be cured, and the patient die afterwards with symptoms of chronic gastritis. This shows you how cautious you should be in receiving, on medical subjects, the *post hoc ergo propter hoc* argument. This mode of explanation of the cure of one irritation by the substitution of another, sprung from the denial of all specificism, in disease and its remedies, by the school of Broussais, one of the greatest errors of the "*physiological doctrine.*" The use of mercury in syphilis, of bark in ague, and many other instances have been quoted against. If in these diseases there be nothing but local irritation, why does not ordinary antiphlogistic treatment always suffice for their removal? Why is it that mercury is the best revulsive in syphilis? The specific character appears under this view, as well as under any other. The term specific may be objectionable as not being precise, but we use it for want of a better, and it rather expresses what the disease is not than what it is.

There is another and a more rational objection to the employment of nitrate of silver; namely, that it has produced a blackening or discolouration of the skin. This, in my opinion, is an objection which will always weigh against the use of the remedy, for there are few who would like to encounter the risk and consequent blame of such an event. It has not been proved that nitrate of silver has cured epilepsy by superinducing gastritis, but it has been proved that it may blacken the skin. Dr. Lombard admits that this may and does occur, but he thinks the frequency of its occurrence much overrated, and states that in the majority of his cases it did not happen at all. He mentions a very interesting fact connected with this subject. It has been supposed that exposure of the skin to the influence of sunlight during the use of the nitrate of silver is the cause of the blackening. Now Dr. Lombard says that this cannot be the case, for one-half of his patients were peasants who worked in the open air, and never took the slightest precaution against exposure to the sun's rays; and yet, among them all, there was no instance of discolouration. He is of opinion, therefore, that the influence of the sun's rays should not be taken into account in a case of blackening of the skin; and this appears to be confirmed by the fact, that, in all cases where the nitrate of silver produced discolouration, the patients were inhabitants of towns, and consequently less liable to exposure. This blackening of the skin, though a rare circumstance, will, as long as we are ignorant of the causes which produce it, and the means of controlling them, be a great obstacle to the internal use of nitrate of silver. I have used this remedy in cases of epilepsy and other diseases, and cannot say much for it; in the hands of some of my friends, however, it has been much more successful. Dr. Lombard thinks very highly of its value. In some cases in which he prescribed it a perfect cure followed, in others more or less relief. He gives some cases of facial neuralgia, in which it appears to have produced a cure. He has also prescribed it with success in epilepsy and chorea.

There is one fact, which appears to show that the cause of the blackening of the skin is connected with something else besides the influence of the solar rays, which I had almost forgotten. In a late number of the *Quarterly Journal of the Medical Sciences*, Mr. Brande gives an account of some experiments he made on the bodies of persons who were tinged by the nitrate of silver. He found on examination *that the deep-seated parts were tinged as well as the superficial*, and was able to detect the oxyde of silver in the bones, and even in the substance of the viscera, as well as in the skin. If this be the case, we cannot attribute the discolouration to the solar rays, though it generally happens that the face appears to be darker than other parts of the body in persons who have undergone this change of colour. The facts, however, that in Dr. Lombard's cases the peasants escaped while the citizens became tinged, and Mr. Brande's discovery that the deep-seated parts are equally liable to discolouration, furnish a weighty objection to the opinion that the blackening of the cuticle is produced by the decomposing power of the sun's rays.

CLINICAL LECTURES

DELIVERED BY

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At the Westminster Hospital.

LECTURE XVIII.

On the Chronic Thickening of the Neck of the Bladder.

GENTLEMEN,—This disease may commence at an early period of life, and can then be kept at bay by the periodical introduction of the catheter; but, as long as this source of disease remains, the patient is never safe. It slumbers on like a smothered fire, ready at some future time, when the patient is more advanced in life, or on the application of an additional exciting cause, to burst forth with renewed vigour, and to lead to his destruction by the production of disease in the neighbouring parts. Fortunately it is, like the chronic enlargement of the prostate, more commonly the disease of an advanced period of life, and is usually as insidious in its commencement and progress. The patient is aware of there being something the matter with him, but he knows not what; he finds he has a more frequent desire to make water than formerly, particularly at night; that it does not flow so readily nor so freely as it had usually done; and that he is most free from irritation whilst his mind is particularly occupied, and especially after dinner, when he can often refrain from attempting to make water for four or five hours. On this account, the complaint is frequently attributed to nervousness, or to derangement of stomach, giving rise to a vitiated or faulty secretion of urine, and the patient is subjected to an internal treatment alone, which, however excellent and necessary it may be, should always be auxiliary to the local management, without which I do not think the disease can be arrested, much more completely overcome.

At this period, the elasticity of the neck of the bladder is impaired: it will not dilate with the ordinary action of the detrusor muscle, and this is therefore augmented. A sensibly-increased delay is experienced before the water begins to flow, and the patient is conscious of the augmented effort made by the bladder: in other words, he is obliged to strain to expel it. The desire in which this originates soon amounts to uneasiness, and rapidly afterwards to pain, relieved on evacuating a little water, but too soon, alas! to return; for the bladder is now never completely emptied, and the urine which remains is a source of great irritation, although the quantity is really inconsiderable. I have considered the disease as being hitherto confined to the very neck of the bladder; and yet it is hardly possible to account for all the symptoms, without supposing the whole of the elastic and muscular structures entering into the composition of the triangular space immediately behind the orifice of the bladder to be in some degree affected, as well as the mucous membrane which covers it. These structures do not perform their functions effectively in expelling the last drops of water, whilst the under part of the orifice, by its greater firmness and loss of elasticity, presents the commencement of a bar or dam, over which the last quantity of urine is not projected when the fundus of the bladder ceases to act; for I am not satisfied that the muscular coats of the bladder contract so as to completely, although temporarily, obliterate its cavity. The desire and pain are felt because the mucous membrane of the bladder is irritable, and particularly that most sensible part of it below and around its orifice. The urine in the commencement is clear, afterwards it becomes a little turbid; small shreds of mucus or fibrine are seen floating in it, soon to be followed by a deposit of the same character, which becomes in turn glairy, viscid, and even resembling pus. At first it is acid, and continues so until this deposit takes place in quantity, when the whole, on standing, may be alkaline, as in the enlargement of the prostate, although the newly-secreted urine is acid. In the commencement of the complaint the urine is not albuminous, but after a time it may become so; the addition of a little nitric acid renders it turbid, and on heating the urine in a test-glass over the candle, the albumen is coagulated; and if it exists in quantity a thick cloud is perceivable in it, and which will be slowly deposited. A small quantity of albumen will be found as a consequence of inflammation of the bladder; a larger quantity is usually indicative of the inflammation being extended to the kidneys. The alkaline property is obtained from the mucous secretions of the inflamed bladder; and if a portion of acid urine can be obtained after washing out the bladder, it shows that the kidneys are not so especially implicated as when they uniformly secrete urine of an alkaline quantity. When the disease is principally confined to the bladder, the supernatant urine will generally be acid, although the viscid mucus below is highly alkaline, turning the turmeric paper brown, or the red litmus paper blue.

The very frequent efforts made to discharge the urine, and which can only be expelled by a considerable effort made by the muscular structure of the bladder, lead to the formation of pouches in the manner I have already explained, and render the case more complicated and difficult of management, inasmuch as the catheter does not give the expected and necessary relief; it empties the general cavity, but not the ponches, except their particular situation can be ascertained, and the instrument guided into them, which can rarely be

done. The instant the person changes his position the contents of a pouch are poured into the general cavity; and, on a second change taking place, that of another, and the desire to make water is renewed; so that, to be effective, the catheter must be worn until all the changes of position which appear to influence the flow of water into the bladder have been gone through. The advantage to be derived from wearing a catheter for the first half-hour on retiring to bed is thus obvious, and must be attended to, or the use of the instrument will be quite unavailing. When the catheter is passed, and the urine in the general cavity is drawn off, the pouches fall down upon the instrument, and give rise to these sensations I have called the fluttering strokes of the bladder; and if a calculus should have passed through the narrow opening of the pouch, the sensation or blow caused by a stone may be perfectly simulated, and give rise to considerable error. A great weight in these cases is felt in the perinæum and rectum, and the uneasiness is constant and often peculiar. It extends also along the penis, although pain is not usually felt at the extremity of it, and a few drops of urine occasionally escape involuntarily. Under these circumstances, the disease may remain for a considerable length of time, until, at last, from some sudden exposure to cold or wet, the symptoms are greatly augmented, and it becomes evident that a more acute inflammation of the bladder has taken place.

Acute idiopathic inflammation of the bladder is a disease of rare occurrence, and is to be subdued, whenever it does take place, by the usual antiphlogistic means. Acute inflammation, as a continuation or metastasis of disease, is more frequent; and, as a supervention on a chronic state of irritation, is, unfortunately, by no means uncommon. When it occurs by extension of disease from the urethra, the desire to make water is urgent; and the pain which accompanies it is so much augmented on the passing of a few drops, that the patient often compares it to the passing of melted lead. It continues after the urine has ceased to flow, and subsides, only to be renewed almost without an interval of ease. It is not only felt in the urethra and along its whole course, but, as the peculiar pain in this part subsides, it is referred to the lower part of the abdomen immediately above the pubes, where it is increased on pressure, and shoots into the perinæum and down the thighs. The urine is discharged in very small portions, generally of a deep red or high colour, although the aggregate amount in twenty-four hours may equal the usual quantity, unless the kidneys are also implicated.

The common symptoms of inflammatory fever are present; the pulse is unusually full and frequent, the skin hot and dry, the thirst great, the tongue foul, with general restlessness, uneasiness, and anxiety, which are much augmented by the absence of rest, and the continued desire to make water. Sometimes in the first instance there is complete retention of urine; and if the inflammation should extend along the ureters, there may be even a suppression of the secretion also; but this is of very rare occurrence. When the complaint has arisen from violence offered to the urethra, by the forcible introduction of an instrument, or from the extension of the inflammation of a gonorrhœa, there is more or less of a discharge from the urethra, which rapidly increases, and is beneficial; for the symptoms of inflammation of the bladder do not subside until the purulent discharge from the urethra is fully re-established. The first symptoms should always be met by abstraction of blood from the arm, by cupping on the sides of the sacrum and on the perinæum, or by the application of leeches in relays, and these means should be repeated until the pain diminishes, and the irritation subsides. It is of the greatest importance to subdue the inflammation quickly, in order to prevent the supervention of a chronic stage, which may lay the foundation for much future distress. The thirst should be assuaged by cooling mucilaginous drinks, and the bowels opened in the first instance by an enema, and by calomel and colocynth, followed by a dose of oleum ricini; but the bowels should not be irritated, as any unnecessary action aggravates the uneasiness felt in the bladder and rectum, which, after the due evacuation of the bowels, should be soothed by the introduction of a suppository of opium. The internal medicines should be those which are found particularly useful in other inflammatory affections, such as a pill composed of half a grain or a grain of the submuriate of mercury, with two grains of James's powder, and one-third or half a grain of opium, every six hours; followed by a saline draught with an excess of soda, and from thirty to forty minims of the vinum radicis colchici, which also exerts a powerful influence upon the inflammatory action of these parts, but which, as well as the calomel, must not be allowed to act too much on the bowels. These remedies should be administered without reference to any thing but the patient's strength, and the violence of the inflammation, and should only be discontinued when their due effect is produced, or the inflammation is overcome. The hip-bath, and hot water contained in a bladder one-third filled, will often also give great relief. As the inflammation subsides, the desire to make water and the pain which accompanies it diminish, the urine, which was at first of a deep red colour and highly acid, becomes turbid, and deposits a sediment very much resembling pus, as well as those pink amorphous or lateritious deposits indicating the pre-existence of inflammatory action.

If the acute inflammation is not vigorously treated, it will not be entirely removed, but subside into a chronic state; and the same result often takes place as a consequence of

those changes to which I have already alluded in the prostate gland and the neck of the bladder, as well as from the presence of a stone, or of an old and narrow stricture of the urethra, or from accidents to which it may be exposed. When irritation has been once set up in the neck of the bladder, gouty persons especially are liable to frequent returns of it, simulating an acute attack. But these cases should be distinguished from acute idiopathic inflammation, or those which occur from violence or metastasis; they are almost purely gouty, and are best remedied by colchicum, with the various preparations of opium, and but little by either general or local bloodletting.

Chronic inflammation of the bladder in various states and stages is, however, the most important, although the secondary disease, in all these cases; and the great object of inquiry is, how to obviate it whilst the primary cause or disease remains,—an object towards the attainment of which I fear little has been, or is soon likely to be, done. In chronic inflammation, the inner membrane of the bladder, which is usually of a pale colour, becomes of a dark red; its small vessels, which carried but little blood, now become distended with it; and particular spots are seen of a darker colour, almost amounting to black, in various places. The mucous membrane, which in its natural state is but loosely attached to the internal muscular layer, is evidently thickened and softer, and perhaps roughened; sometimes it is abraded, particularly around the darker patches; and in some rare cases has been entirely removed, so as to leave the muscular fibres exposed. It has even been said by authors to have been found in a gangrenous state. The great evil does not rest here. Sooner or later the muscular coat is implicated, in one or more of the various ways I have pointed out; the chronic inflammation extends upwards along the ureters, generally, however, affecting one more than the other, and at last giving rise to a similar chronic disease in the kidney, which increases the mischief, and often leads to the destruction of the patient. It is found that disease of the kidney can equally give rise to irritation and chronic inflammation of the bladder, although this appears to occur rather from sympathy than from the extension of chronic inflammation downwards; and a state of irritable bladder is thus produced, which can only be relieved by remedies directed to the removal of the derangement of the kidney; whilst, from inattention to this point, the irritable state of the bladder may become a permanent disease, each re-acting on the other.

When the irritation and pain in the bladder are symptomatic, the urine is often natural, and simply increased in quantity, although sometimes vitiated in quality, as discoverable by chemical examination, but contains little or no mucus. When the urine is natural in quality or quantity, or nearly so, but does contain mucus, and in considerable quantity, there is, certainly, chronic inflammation of the mucous membrane of the bladder. When the urine is acid, and otherwise natural in appearance, and contains purulent matter or blood, with little mucus, the kidney is, for the most part, affected, and symptoms of that affection will prevail. But, in cases of this description, the bladder should always be carefully examined, in order to detect, if possible, the presence of any calculous matter. When the urine contains much, or is loaded with mucus, the bladder is certainly affected, and the deposit will be alkaline, although the supernatant part will often be acid; but if the urine be generally alkaline and unnatural, the disease may be attributed to the kidneys, and often depending on the habit generally, as a constitutional disease. Alkaline urine is highly irritating to the bladder, and invariably gives rise to mischief, if it continues too long; hence the caution necessary to be observed in the administration of alkaline remedies, and particularly of soda; and which I have known, when given for gonorrhœa, and the use of it has been long continued, to cause greater uneasiness than that it was intended to relieve. For the full investigation of this subject, as connected with the composition and states of the urine, I must refer you to the able work of Dr. Prout, the perusal of which will afford you great information, and to the article "Gravelle," by Magendie, in the Dictionnaire de Médecine et Chirurgie.

When the disease of the prostate, or of the elastic structure of the bladder, or of the urethra, has given rise to chronic inflammation of the mucous membrane of the bladder, the patient has a constant sense of uneasiness in the part, a frequent desire to make water, which is more or less opaque and turbid when recently passed, with flocculi floating in it, like shreds of membrane, and which the patient often mistakes for them. As the urine cools, it becomes more transparent, and deposits the mucus in a thick adhesive state, more or less opaque in colour, sometimes streaked with white, sometimes with blood, and frequently of a yellowish or purulent appearance, and in which case the urine is usually altogether alkaline. When the mucus is of a greyish colour, it is sometimes particularly viscid, especially after standing a short time in the vessel in which it has been received, and may be drawn from it in the shape of very tenacious ropy matter. This secretion is oftentimes equal to the whole quantity of urine, and sometimes becomes thickened and opaque in the bladder, and blocks up the passage, so as to be voided in portions with greater pain and difficulty. The desire to pass it and the urine is at last so much increased, that the patient is obliged to wear a particular apparatus for receiving it, or to have the urinal always at hand, by which

time his health has been so much worn down, and he has become so much emaciated, and is in such constant suffering and misery, that he looks forward to his dissolution with a fervent hope for its speedy occurrence. The urine is sometimes highly offensive, as well as when it is retained by a diseased prostate, and gives off a strong ammoniacal odour; and if ulceration has taken place, the pain is not only wearing, but most acute, and the presence of the catheter cannot be borne in the bladder.

We are deficient in remedies capable of exerting a very beneficial influence on the bladder, when in a state of chronic inflammation, and the discovery of new, or the better adaptation of old ones, are highly desirable points. Those we at present possess are of two kinds, general and chemical. The general means of treatment applicable to the bladder, in a chronic state of inflammation, admit of little difference of surgical opinion. The position of the patient should be as much as possible horizontal, with the hips a little raised, in order to favour the return of blood from the parts affected; the general and even the local abstraction of blood should not be had recourse to, as neither is commonly advantageous, although the abstraction of a small quantity by cupping from the perinæum, is often useful in alleviating any sudden aggravation of disease, and in bringing it back to its previous chronic state. The loss of a large quantity only debilitates the patient, without influencing the state of chronic inflammation. I have, however, thought I have derived, in some cases, considerable advantage from the application of one or two leeches every day to the verge of the anus, for twenty or thirty days successively; they act as a continual and steady drain, in a manner which is not sufficiently appreciated in many diseases. A seton in the perinæum has been sometimes of great service, and a steady discharge from above the pubes, I have seen of use, although it has been rarely equal to the inconveniences it occasions. Blisters on the sacrum are occasionally useful in the commencement of the disease, but give rise to so much distress, from their situation, at a later period, that I now never resort to them.

Mercury, as an alterative, sometimes does good, and particularly in those cases in which there is no chronic derangement of the neck of the bladder, a point of importance to advert to in the treatment of the disease, and one which may reconcile some diversity of opinion on this subject, for it does not appear at first sight, why a remedy which is so beneficial in many cases of chronic disease of other viscera, should be detrimental, or of no use, in this. I apprehend that the opinion entertained of its inutility has been formed, from the observation of its effects in which the prostate has also been diseased, or the chronic thickening of the neck of the bladder has taken place, or a stricture of the urethra, or other disease of this part has existed, in either of which, and it is very rare to find that one or the other does not exist, it could be of little use until the complication was removed; and as it would debilitate without rendering any corresponding advantage, it must necessarily have been considered injurious. Mercury, when used, should only, I am led to infer, be given where there is no especial complication of disease, or its use should be delayed until this is removed. It is rarely, also, beneficial when the constitution of the individual is broken, or the disease has been of long standing, and must always be given with great circumspection. When the powers of the patient are unbroken, and the urine is acid, mercury may be tried without fear of its doing harm, but when the urine is alkaline, it always does mischief, by increasing the secretion, rendering the person more nervous, and otherwise debilitating him. The countenance and appearance of a person secreting alkaline urine, imply a state in which the use of mercury is not likely to be useful. Care must, however, be taken to ascertain that the urine is alkaline when secreted from the kidneys.

Alkaline remedies, such as the carbonates of potass and soda, have been rather forbidden of late years, except in small doses combined with purgatives and with tonics, given with the view of improving the state of the primæ viæ, on the supposition, that when taken in larger quantities they would render the urine more alkaline, and consequently more irritating and more liable to calcareous deposits. The fact of their being likely to do so in such cases cannot be disputed; but they do not always do so; and I have seen them do good when they chemically ought not to have done it, and empirical seemed to have succeeded where chemical medicine failed. I suspect, however, that if closer attention had been paid to these cases, it would have been found that the urine was not alkaline when secreted, but only after it had remained some little time in the bladder. I have already said that the alkalies do often relieve irritation at the neck of the bladder in a remarkable manner, and that when long continued, or improperly administered, they as readily increase if not occasion it.

The leaves of the uva ursi and of the buchu, or diosma crenata, and the root of the pareira brava, have all been more or less lauded in this disease, and have all equally disappointed the expectations of the surgeon. I have seen each of them of the greatest possible advantage; and I have seen each of them fail in apparently similar cases, both separately and combined, so as to leave their efficacy a matter of great doubt. It is probable that their utility may be confined to the state of chronic inflammation alone, and that when this is complicated with derangement of the neck of the bladder, their usefulness ceases. The uva ursi is best given in pills

made from the extract of the leaves, in the dose of from ten to twenty grains, three or four times a day. When given in infusion, a small quantity of carbonate of potass, such as two scruples to a pint of water, and half an ounce of the leaves should be added during the maceration, as it enables the water to extract the virtues of the plant more effectively. The buchu should be treated in a similar manner, unless the presence of any alkaline matter in the medicine should be objectionable from the state of the urine. The root of the pareira brava is used in a decoction made by simmering half an ounce to an ounce of the root in three pints of water, containing one drachm of carbonate of potass, down to one pint, one half of which may, in a similar manner to the infusions, be taken daily. They seem gradually to diminish, and ultimately to remove, the irritability of the mucous membrane, and of course to suppress the secretion of the mucus from it, which renders the urine alkaline, and forms the ropy, glairy deposit at the bottom of the utensil. The pareira brava is at present the greatest favourite, from the strong recommendation of Mr. Brodie. The buchu takes the second place.

When the bladder has been irritable, and the urine high coloured and acid, I have given them in tincture with the liq. ammon. and with the tincture of hyoscyamus, with the greatest advantage, very gradually increasing the dose of each until the effect was produced, and which is hastened in many instances by the addition of the colchicum. When the urine is, on the contrary, alkaline, and liable to deposit, the nitric and phosphoric acids should be administered instead of the ammonia.

Narcotics are, however, the most potent palliative and auxiliary remedies; and opium is the first in all its various preparations, whether given by the mouth or administered by the rectum. Hemlock and henbane, the extract of poppies and of lettuce, often afford considerable relief, and their use may be varied or alternated with that of opium to advantage.

The urinary stimulants have all been recommended and tried in turn, such as the balsam of copaiba, the Chian and Venice turpentines in their various ordinary and extraordinary preparations, as well as the cubebs. When given in small doses, they sometimes do good when the disease is in its early stage; but I have never seen any permanent advantage from their use at a later period.

[In the ensuing number, we shall give the concluding lecture of this interesting course, and we shall then have laid before our readers the opinions of a skilful and talented practical surgeon on a class of the most painful, troublesome, and at the same time, most frequent of those diseases to which "flesh is heir."]—Ed.

CLINICAL LECTURES ON SURGERY,

DELIVERED AT

THE HOTEL DIEU, PARIS,

BY BARON DUPUYTREN,

PRINCIPAL SURGEON OF THAT HOSPITAL.

Corrected by himself.

Simple Commotion — Different Degrees of Commotion—Symptoms of—Treatment of Primitive Symptoms—Duration of Primitive and Secondary Symptoms—Characteristic Symptoms of Commotion—Treatment of the different Degrees—Pathological Condition from Commotion—Commotion of the Liver—Spleen—Kidneys—Compression—Diagnosis between Compression and Commotion—Trephine, inutility of—Contusion—Diagnosis between, and Compression—Necrosis from Contusion—Trephine, when useful, &c. &c.

Gentlemen,—The immediate or consecutive effects of gun-shot wounds on the brain, are, as I stated to you in a former lecture, either *commotion, compression, contusion,* or *inflammation.*

Simple commotion is not accompanied with any material lesion of the brain, but consists of a more or less prolonged incapacitated state of that organ, produced from concussion; this condition frequently results from blows, falls, lesions inflicted by sharp, pointed, or blunt instruments, or, as is commonly the case, is induced by projectiles, which have not traversed the bones of the cranium; blows or falls on other parts of the body may also produce these symptoms.

There are many different degrees in the phenomena of commotion to be observed, and which are of great importance to the practitioner.

First degree.—The symptoms are dimness of vision, tinkling in the ears, eyelids half closed; great weakness about the legs suddenly supervene; this is followed by lassitude, want of appetite, pains of a vague description, and a great disinclination to set about any thing. These primary symptoms are to be combated by stimulants, aromatics, &c., but which must be administered with the greatest caution; for if given in excess, they will in all probability produce inflammation of the brain and its meninges. A light diet should be permitted, and an excess of every thing should be cautiously refrained from.

Second degree.—The loss of all power of knowledge suddenly ensues; there is a complete abolition of existence, so that when the action of the brain is again produced, the patient is quite unconscious of every thing that has passed during the time the organ was in this state of commotion; great prostration, trembling of the muscles, emaciation, intellectual powers uncontrolled; frequently spasms are induced, which phenomena you may per-

ceive daily to take place in the butchers' slaughter-houses, when they knock down an animal; stools and urine pass involuntarily. Sensations of light, sound, smelling, &c. are more perfect than in the first degree; voluntary movements destroyed; nevertheless, respiration and circulation continue, which is, in consequence of the nervous organic principle that presides over these functions coming from the sides of the spinal marrow. At the instant the commotion is produced palpitations ensue; the respiration becomes at first irregular; soon, however, partakes of its regularity, and is carried on with such little power of the walls of the chest, and with such slight noise, that one can scarcely perceive that the patient breathes: this is a characteristic symptom of this state of the brain. The elevators of the eyelids have lost their power, consequently the eyes are always closed. If we raise one of them by means of our fingers, we find the eye glassy, the pupil dilated, and from the strongest light will not in the least contract; sensibility obtuse; and sometimes these symptoms are accompanied with vomiting. The primitive symptoms in the first degree last only a few seconds, or at most a few minutes; in the second, the effects continue for one, two, or three days, and sometimes even for a longer period. In these first primitive symptoms an error may easily, and has frequently been committed, by confounding commotion with compression, and the return to health has been attributed to a re-absorption of the blood, which, in fact, has never been effused.

The signs, then, characteristic of commotion are, inability to move from the situation in which the patient has been placed; the *malade* appears plunged in a sound sleep; there is scarcely any movement of the pectoral walls; countenance pale; eyelids paralysed; insensibility of pupil to movements made before the eye, sometimes importuned by light, without the least contraction. The patient can swallow, but deglutition takes place only when the liquids are introduced into the back part of the pharynx, otherwise the liquids remain in the mouth. The movements of the heart are scarcely perceptible; the pulse is so soft and gentle that the least pressure causes its cessation, but its beats are regular; digestion is impeded, secretions checked; frequently there is retention and sometimes incontinence of urine: also retention of fæcal matter. From the obtuseness of sensibility it is necessary to pinch them several times before the least perception is observed, and then it is very rarely they move their hands to the part affected. These effects are well marked at the commencement, but by degrees become diminished, at which time, by pinching the integuments of the limbs, they draw those affected speedily from you; pulse becomes stronger and more frequent; the pupils are fatigued by the action of light, and this sensation is even produced through the eyelids. The patient now changes his position, speech returns, and he is able to communicate his wants: asks for food, after which he again falls into a profound sleep, which frequently lasts for twenty-four hours. After the recurrence of these symptoms two or three times, their intellectual faculties return, but they are incapable of fixing their attention, or making constant movements. They will commence a phrase, and stop in the midst of it; movements, either voluntary or involuntary, are only carried to a certain extent, *and remain half finished.* In four, five, or six days these symptoms are re-established, but the consequences yet remain for some considerable time; there is great feebleness, inability to read, and, in fact, to keep up prolonged conversation; they will commence to write a letter, but be unable to complete it; much indigestion; difficulty in progression; and, from the debility, the genital organs remain in a state of torpor. This last affection I have seen last for two, three, or four months, which has greatly mortified the patient.

In this stage mild stimulants are not sufficient; bleeding and leeches are immediately contra-indicated, one bleeding being sufficient to determine death in a part struck with violent commotion. But, at the expiration of an hour, if the pulse rise, if the functions have become slightly re-established, bleeding, in robust and sanguine subjects, will frequently prevent the dangers of compression. If the subjects are delicate, leeches behind the ears, sinapisms, foot-baths, injections, purgatives, nauseating drinks, and other revulsives are beneficial. Great benefit is sometimes derived from the application of blisters to the neck. Sometimes the patients are unable to recollect proper names, &c., but, in the course of a short time, this faculty is re-established.

Third degree.—In this stage of the commotion the patients generally die, and death takes place very speedily; they are at once deprived of all sense, all intellectual function is destroyed, and the faculty of all voluntary movements is suspended. Frequently there is convulsive movements, involuntary evacuations, both from the bladder and rectum; pulse is very irregular; respiration feeble, and gradually becomes extinct; and in the space of a few minutes the vital spark is gone. Bleeding in this state will certainly produce death: frictions and stimulants are useless.

On the autopsy, not the slightest trace of effusion, compression, contusion, or disorganisation is perceived. The consistence only of the organ is defective, and from the least effort it becomes torn.

If the cranium of a patient who has died of apoplexy is opened carefully (with a saw), the brain appears to have acquired a volume much greater than the box which has enclosed it, or, at least, it preserves its volume and form. From commotion, on the contrary, the brain appears condensed, and occupies less than its natural space. It is, that in this latter

condition it contains less blood, and, deprived of its action and stimulus, it falls into a state of apathy. But with the naked eye, or with a magnifying glass, not the least trace of rent, contusion, or separation is observed. Commotion also may be accompanied with other lesions of the brain.

In the description that I have just given you of commotion, I have taken the brain as an example, because the effects are more marked in this than in any other organ, and because, through the medium of the nerves, they are distributed to every part of the body; the spinal marrow, also, is not much less susceptible than the encephalon, and it is from paralysis of the parts to which the nerves are supplied that its effects are recognised. It is from effects of the spinal cord that the inferior limbs are observed to become in a state of debility; and, when commotion has taken place from concussion of the inferior part of it, we have, as well, an affection of the bladder and rectum; when the commotion has extended to the middle of the spine, the walls of the abdomen and chest are in an atrophied state; and if the commotion extends to the diaphragmatic nerves, there is complete paralysis of these parts; and, in such a case, we find the projectile has struck the superior part of the spinal column; we observe, also, the respiration cease, and of course death is the result. The commotion may further extend to the different plexuses of nerves which come from the spinal cord, and thus be extended to the parts which are supplied from them to the different regions of the body. The effects are then a diminution of the sensibility, a numbness of the parts, &c., which may cause the most complete immobility and sensibility; such are, for example, cases of commotion of the brachial and sciatic plexus, from which results a complete paralysed state of the superior and inferior limbs.

Lastly, It is not only the nervous parts which are liable to commotion; others, which are endowed only with small portions of nervous fibres, are similarly affected; the liver, which from its mass and texture is like to the brain, spinal marrow, and different nervous plexuses, and this organ more frequently becomes affected. The phenomena which results are entirely different to those that we observe in the organs before spoken of; nevertheless, they produce debility, or suspension and alteration of the functions of the organ; there is want of appetite, weariness, indigestion, nausea, or vomiting, a sensation of weight in the hypochondrium, alvine dejections of a light colour, and urine of a saffron hue. Sometimes are accompanied with these symptoms, as in commotion of the brain, reaction sufficiently violent to produce inflammation, when pain of greater or lesser intensity of the right hypochondrium supervene; to this are added, morbid powers of the heart, pain in the shoulder; bilious vomiting or purging ensue, and fever sets in; the hepatitis becomes then more or less acute, and there results greater or less danger. The spleen and kidneys are liable also to the effects of commotion, but these organs are more rarely affected. The symptoms in these cases are not much less important than in the preceding organs, but otherwise they are more appreciable.

Compression of the brain, if it takes place gradually, may run on to a very considerable degree; on the contrary, if the effects are sudden and violent, death is the result, however slight the effusion or cause may be. From a blow inflicted by any means, if it has neither lacerated the flesh nor fractured the bone, an effusion takes place in the interior of the cranium; if this is limited, there is hemiplegia of the opposite side; if, at one time, the same quantity exists on both sides, there is neither hemiplegia or paralysis, but rigidity of the muscles.

Thus, you perceive that the general effects of compression are nothing, or scarcely nothing, if it is gradually produced; if it is speedy, the symptoms are rapid and serious; if the compression be slight, the intellectual faculties exist; but if, on the contrary, the compression is great, the intellectual powers are destroyed, coma becomes intense, and the respiration stertorous—an obstacle to the functions of the thorax, from inactivity of the brain. The following, then, are the symptoms which enable us to distinguish the difference of commotion from compression.

In commotion, as I have before observed, the patient remains easy and quiet in bed, the countenance is pallid, eyelids closed, the pupils are much dilated, and respiration so gentle, that there is difficulty in perceiving its action; the beatings of the heart and pulse are scarcely perceptible.

In compression, the patient is extremely uneasy, and remains agitated as much as the compressed body permits; the countenance has a reddish violet hue, the pupil is contracted, the respiration difficult and stertorous; the chest is embarrassed by the mucous secretion; all the muscles that can, are brought into action to assist in respiration, and the pulse is hard, full, and frequent.

A slight or even very violent compression is not always fatal; bleeding, purgatives, and a general use of revulsives, are the best means of combatting the symptoms.

In the second degree, the more violent the treatment, the more uncertain is the result; sometimes the effused blood loses its serosity, and is absorbed: if the foreign body is not susceptible of reabsorption, nature habituates herself to it.

If, from a sudden cause, the bone, for example, becomes fractured, blood or pus is collected in a particular mass, the trephine should be used, and the bone raised, providing nature cannot habituate herself to the compression; but in such a case, are we always certain of the point where the effusion exists? Fractures and contusions take place

at different parts from where the blow is inflicted, and in these cases the difficulty is exceedingly great.

If the effusion has extended, and there is no hemiplegia, the trephine is useless; for it would be necessary to perforate many parts of the cranium, and then perhaps not give issue to the effused blood or pus.

An old woman, who received a bullet on the occiput, was taken in at the Hôtel Dieu; the ball had lodged in the integuments, from which it was extracted; it had much contused and even slightly fractured the bone. She was unwilling to remain at the hospital; she walked to the Hôtel Dieu, and after the operation walked home again. In the course of ten or twelve days, shivers, coma, and fever supervened; the trephine was used, and gave issue to an abundant sanious purulent fluid; after this she became much better, and would in all probability have recovered, if she had not been attacked with inflammation of the lungs, of which she died.

The trephine, which is so frequently fruitless, and which by Desault was almost expunged, is insufficient at all times to destroy the cause of the evil, though often productive of dangerous results; not that the danger is owing to the loss of substance produced by this instrument, for individuals have survived even the loss of the greater part of the arch of the cranium, but from the inflammation which ensues, in consequence of the accession of air.

It should be used, then, only in cases in which the effusion is sudden and considerable, and when it is limited, and this limitation is well defined on the arch or sides of the cranium.

If a foreign body has partially traversed the bones of the cranium, if a ball is lodged in the bone, if the point of a knife is broken in the cranial vault, and there remains, the trephine may be useful in extracting it. The trephine is also indicated in a case of a small circumscribed fungous tumour of the dura mater, which has, to a certain extent, caused absorption of bone, but then the danger is exceedingly great.

Contusion of the brain is frequently confounded with commotion. Contusion is a true organic lesion, produced by a more or less large rounded body. The parts enveloping the brain are of a different consistence; the external soft parts, but more particularly the bony, can resist the violence of a blow, but the nature of the brain is otherwise much more exposed to it, and contusion may take place without either lesion of the bony or soft parts, and this is what occurs in the majority of cases. The external parts may change in form, without there being solution of the integuments, or fracture of the bones; and compression causes this cerebral disorganisation, which characterises what is called contusion. Contusion of the brain, like commotion, may be divided into many degrees.

In the degree most slight, few parts are only altered, a little effusion of blood takes place, and the cure may be completed; but when the tissue is deeply disorganised, when the effusion is considerable, death in most cases is the result; and what renders this lesion fatal, is the inflammation and suppuration arising from the compression that has determined it. It is not until the fourth or fifth day that these symptoms manifest themselves, that is to say, not till inflammation takes place, so that the organ wounded is of less importance than the consequences of the lesion.

There is an essential difference between contusion and commotion. I will here give their distinctive characters, but previously I will mention how it is produced, and what are its effects.

There either may or may not exist lesion of the external parts; and it is most frequently caused, as I have before named, by bodies which are more or less round, and whose surface is of greater or less extent. The causes are then analogous to those which determine commotion; and it is also almost impossible to distinguish commotion from contusion, especially at the commencement. Commotion is complicated nearly always with contusion; but if there is no commotion, the patient struck rises immediately without accident. The effects of commotion successively become extinguished, whilst, on the contrary, in contusion the effects continue to increase. It is not until many days from the accident that the symptoms become aggravated, and are produced from inflammation. In contusion the patient complains of constant pain, fever supervenes, accompanied with delirium, emaciation takes place, and coma frequently ensues from the compression. If at the commencement bleeding has been properly had recourse to, if purgatives have been judiciously administered, the symptoms are observed to diminish, and the patient recovers. The inflammation is thus prevented or moderated in its effects, and reabsorption of pus is the result. But the lesion is then very limited and superficial, if it is of greater extent, and violent inflammation of the brain is in most cases fatal.

If the contusion was always direct, we might then ascertain the exact point that it occupies, and where an opening might be effected; but it frequently takes place in a different part from where the blow is received, and the difficulty is then extreme.

Inflammation of the brain is frequently complicated with arachnitis; we have then shivers, contraction of pupil, with great sensibility of light, &c. After death we find the substance of the brain covered with thick mucus, mixed with blood, if the patient has lived but a short time; around this disorganisation there exists an inflammatory circle. The substance of the brain is otherwise denser, more yellow, and about it are observed reddish spots.

If the contusion is of great extent, if both lobes are affected, death results either from the commotion, or from the effect of the contusion. If one lobe is only affected, three or four days generally elapse without symptoms of importance. I will here illustrate an example: a young man, 15 years of age, in the ward of St. Paul, received a violent blow on the head. There was an extensive wound on the head with loss of bone; for three days he was able to get up and walk about the ward; on the fourth day symptoms of contusion ensued, and in three days more, in spite of bleeding, leeches, &c., he died. On the post mortem examination half of the brain was found disorganised. This kind of disorganisation then, we should always endeavour to prevent by treatment, before the symptoms set in. If the pupils are contracted, if there is stertorous breathing, and symptoms of commotion absent, contusion is to be feared; general and local bleeding becomes then indispensable, and catharto-emetics should be administered. If inflammation has commenced, bleedings should also be employed, revulsives applied to the extremities, and to the intestinal canal. If coma causes you to presume there is a collection of pus, and the seat of the disease can, for a certainty, be defined, the trephine becomes necessary; not that this operation scarcely gives a chance of success, for should a small quantity of matter escape from the opening, it does not prevent the formation of purulent matter, and the trephine frequently causes inflammation of the arachnoid.

If the contusion is produced by fracture, the osseous fragments should be raised, and thus furnish a free exit to the pus. The contused part may then be destroyed, if it escapes externally, or forms very remarkable morbid growth, which is sometimes the case, and which takes place in a few hours, it must be cut off. A portion of this morbid growth is excised, the next day a new repullulation is formed, and one can scarcely perceive the promptitude and volume of these reproductions. Most commonly, then, the patients die in spite of the opening, and in spite of the disencumbrance of the overloaded brain. These circumstances prove the frequent inutility of the use of the trephine.

Contusion, then, is one of the most dangerous affections of the brain, less serious from its immediate effects, than from the consequent inflammation, which gives rise to a considerable production of pus.

Thus commotion, compression, and contusion, become causes of inflammation; independent of these causes, it is determined by the presence of splints from bones, from indentations of portions of the cranium, from projectiles, and, finally, from exciting aliments, the abuse of liquors, passions, &c. Inflammation, consequently, is one of the most common affections of organs, and particularly of the brain.

Inflammation, then, is a constant attendant of contusion, as well as most ordinarily accompanies lesions of other parts.

We have already spoken of erysipelas, a so frequent result from wounds, that scarcely out of three wounded, we find one or even two exempt from it. Erysipelatous, or diffuse phlegmon, is more rare, but much more dangerous.

The pericranium may be the seat of inflammation; the bones also at the same time may inflame and suppurate.

Any blow or fall, whether it has produced a wound or not, may determine this lesion; if the bone is slightly contused, necrosis frequently is the result. If the external table of bone is only affected, separation frequently takes place, suppuration of the tissue of the diploe supervenes, and death is the consequence.

If the contusion is more violent, so that the whole thickness of bone partakes of necrosis in the course of twenty, twenty-five, or thirty days, another inflammation almost always arises, in consequence of the immense suppuration between the bone and dura mater, which causes symptoms of compression, or arachnitis. The pus, in this case is not formed at the expense of the dead bone, but from that of the dura mater, which, although from its fibrous character, partakes difficulty of inflammation, nevertheless inflammation sometimes attacks it.

The bone is either struck with necrosis immediately, or this in a short time supervenes. This bone is then a foreign body, placed between the internal and external parts, adheres still to the other living osseous parts. Now if we examine how an eschar separates from the soft parts, we shall find that it is by inflammation. An inflammatory circle is produced on the limits of the eschar; this inflammation, we find, exists as much in the internal as external parts, and is accompanied with more or less suppuration. Thus inflammation is also necessary for the separation of necrosed bone and dura mater; if it is not accompanied with much suppuration, the symptoms are but slight, though, on the contrary, if it is abundant, it becomes from its quantity dangerous (compression) or else from contiguity of tissue and inflammation (arachnitis, compression, death).

What then do we call this secondary inflammation? osteitis! no; the inflammation is in the dura mater. If the denuded and contused bone appears blackish, or grey, it indicates that the necrosis has extended to the internal surface; and it is at this time, that we can and ought to prevent the effects of inflammation and suppuration by means of the trephine; it is thus in cutting an eschar that the patient complains of pain, &c., &c.

But beneath the dura mater is another serous tissue, the arachnoid; beneath this a cellular serous tissue, extremely delicate, again under this the brain. It will be unnecessary

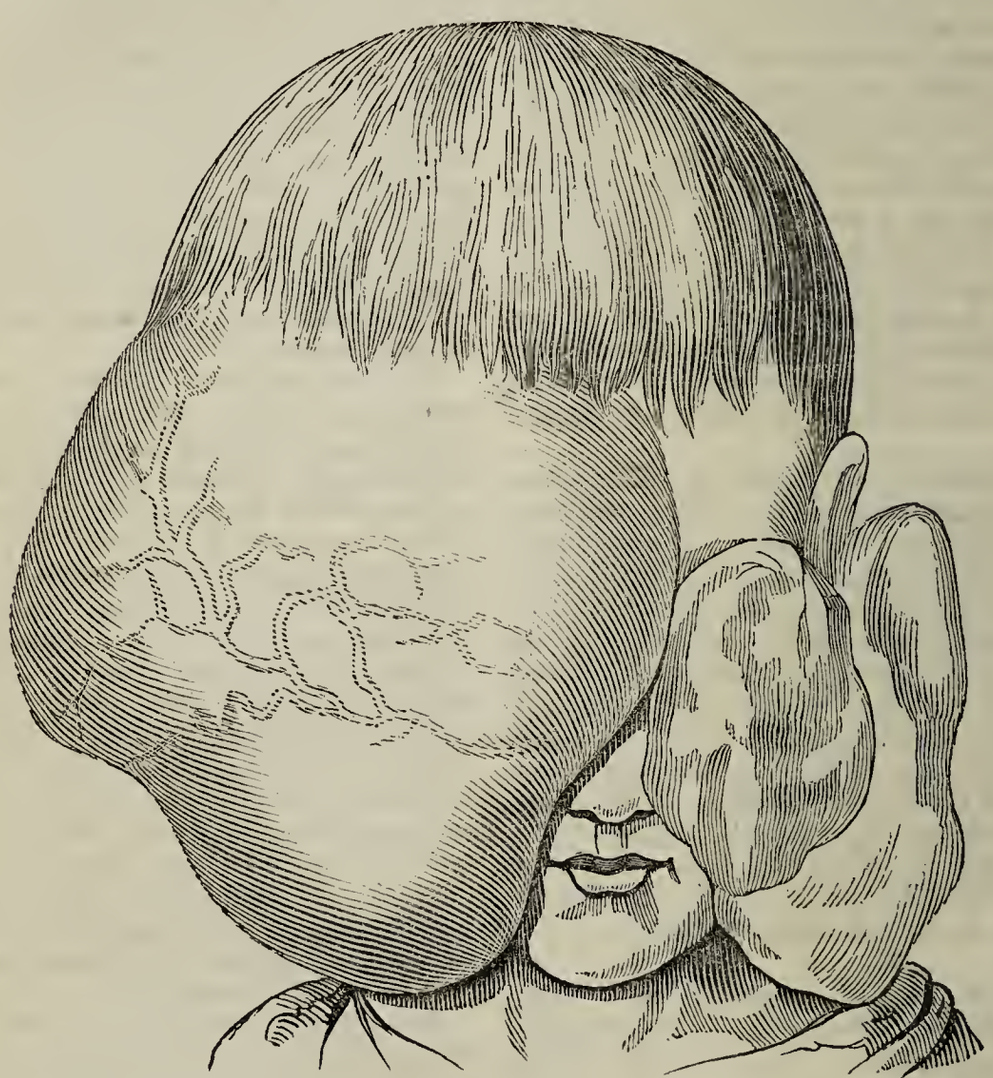
for me to describe the inflammatory symptoms of these different tissues and organs, as I shall only be repeating what you may observe in almost every book. I will continue in my next lecture with wounds of the face.

CASES AND OBSERVATIONS ON FUNGUS HÆMATODES.

BY WILLIAM BAINBRIDGE, ESQ., M.R.C.S, TOOTING.

The accompanying sketch, which represents a curious and, perhaps, instructive instance of three forms of fungus hæmatodes, coexisting in the same individual, I have sent for insertion in the *London Medical and Surgical Journal*, if you think it of sufficient importance, in conjunction with some others.

The patient, a child four years of age, was the subject of the disease about two years. It commenced in the left eye, producing loss of vision, and the appearance of a speck on the retina, which looked like "polished steel," the pupil became fixedly dilated, and of a greenish hue. As the disease progressed, symptoms were produced very like cataract and amaurosis conjoined, in consequence of the tumour at the bottom of the eye very exactly representing an opaque lens. The conjunctiva was now vascular, the globe very irregular, the iris pushed forwards, and shortly afterwards the sclerotic ulcerated, and the fungus appeared in the shape of large, red, exuberant granulations. Either at this stage or a little previous, an *operator* would ex-



tirpate,—but mark the inevitable result. A small, hardish tumour is discovered a little anterior to the lobe of the left ear; it soon became more elastic and unequal, and increasing in all directions, produced a circular, flat, mushroom-like growth, which covered the ear and the neck nearly as far as the shoulder, and extended up the temple. It ulcerated early, and then the external surface was irregular and flat, appearing to be covered with a serous membrane, dried by exposure to the atmosphere, dotted with numerous red points, and exuding a sero-purulent fœtid discharge. Both this and the fungous eye bled a few drops occasionally. A little before this period the right temple began to exhibit a slight bulging, which on examination was ascertained to be a tumour with a broad base, having the feel as

if it were a cyst tightly filled with some thinnish fluid, the colour of the skin unaltered, surface even, and no pain complained of. In the course of time it became unequally developed, and on kneading it, felt very much like an India-rubber foot-ball not quite full of air. When it had attained a considerable size, it was very difficult to decide whether or not it was an encysted fluid; indeed the surgeon under whose care he was admitted, punctured it, in order to ascertain whether it did or did not contain fluid. At the period the drawing was taken, this last named tumour projected several inches from the temple, extended over the right eye, partly across the mouth, and afterwards nearly reached the shoulder. The skin then looked thin, translucent, polished, and blue veins, as seen in the drawing, meandered in various directions; though so considerable in size, it never ulcerated. It is rather singular this patient appeared to suffer so very little from pain. He died from mere exhaustion and inanition. No post mortem could be obtained.

Wardrop, in his "Observations," affirms that fungus hæmatodes most usually affects children under 12 years of age, and Travers, in his "Synopsis," states that this disease will occur primarily in any texture of the eye, except the lens and cornea; whereas mere cancer is only found as a primary disease in the lachrymal gland, conjunctiva, and eyelids. I took a note of the case of a tramper who came to desire me to give him something to compose him "a wee bit at neeght noo;" his left orbit contained a sloughing, putrid mass, implicating every texture within the socket; it sometimes bled rather freely, but his pain was not excessive, though he required an anodyne to relieve his restlessness during the night. He said it commenced eighteen months previous, with pain shooting through the head, "inflammation of the eye," and blindness, for which symptoms he had been bled, and his mouth made sore with some pills, after which he considered himself rather worse than better. His age was about 45; he never had anything of the kind in any other part of his body. It is worthy of remark, that this poor fellow, though afflicted with so loathsome and fearful a malady, possessed an extraordinary buoyancy of spirit, and a very tolerable share of health, being able to walk several miles a day, in the pursuit of his honourable vocation of match-seller. I never saw him afterwards.

In further illustration of some of the characteristic features of fungus hæmatodes (which is, indeed, the sole object of this communication), I may, perhaps, be allowed to present you with an abridged history of another case not altogether devoid of interest.

J. B., æt. 5 years, June 20th, 1829. Having a tumour which grew from the space between the verge of the anus, and the tuberosity of the right ischium, projecting outwards about $2\frac{1}{2}$ inches, and having a circumference of about 3 inches. Its figure very much resembled a German sausage cut in two. The free end was quite flat, as if cut with a knife, and had a well defined margin; this flat surface was ulcerated, and discharged a small quantity of a sanious, rather fœtid fluid, and bled occasionally when hit, or, sometimes, during a stool. The poor little fellow cried a good deal, and complained of the tumour, especially while at stool. It felt soft, and more doughy than elastic. About nine months ago, the child complained repeatedly of this part, which at last attracted the particular notice of the mother, and occasioned her to examine the place minutely, when she discovered a small swelling, the size of a hazel nut, colourless, and quite soft. As the health was unimpaired, she did not attach much importance to its presence, and therefore neglected to apply for advice. Three months afterwards, continuing to increase in size, a medical man was consulted, who applied leeches, and administered some medicines, among the rest powders with calomel and sugar. After this time it grew much more rapidly than before. The rectum was ascertained to be unconnected with the tumour.

An immediate operation advised. Extirpation was effected by making two incisions near its base, in the form of a double ellipsis, and dissecting out the tumour, which was not connected with the surrounding structures, except by means of cellular tissue. The wound was only just healed when fresh tumefaction was evident beneath the cicatrix, which almost immediately began to ulcerate, and some small fungi sprouted forth. Extirpation was again performed, and tinct. ferri mur. applied. In less than a month the enemy was again apparent in the form of little insu-

lated clusters of redundant granulations, looking as if painted red at their apices, very painful, and bleeding on being slightly touched. A third operation was performed, the integument and portions of muscle cut away to some extent, and as near to the rectum as was consistent with its safety. A concentrated tincture of iodine was applied several times after this extirpation. But this also failed; the discharge became ichorous and offensive; fungi studded the wound; and, in utter despair, it was left to take that course which, I believe, the most transcendent surgical or medical skill could not have arrested. The only attainable object now was the relief of bodily pain; and though every effort to rescue this poor sufferer from his inevitable fate had been most signally defeated, we had the delightful assurance that there yet remained the power to smooth the pillow of death, and divest the tyrant of some few of his horrors. From residing several miles distant, and being myself much occupied, this case was now seldom seen, and he died some time before I was informed of the event, in consequence of which circumstance no post mortem examination was obtained.

The variety of feel and mode of growth, as instanced in these cases, seem to me to depend not more upon the kind of morbid deposit than upon the structure and location of its attack. Thus, the enlarged parotid gland, which was situated under fascia, at first felt somewhat hard, and then, being restrained in its growth, spread about and became a flat mushroom-like fungus; but the tumour on the right temple, in the same case, and the one near the rectum, in the last cited, felt soft and elastic, and projected outwards from their attachments; the first rotund, nearly shaped like a ball, and the last like a German sausage. These being seated in loose cellular membrane, had no fascia to obstruct their growth.

The pain experienced is also very various, depending, no doubt, on the vicinity being more or less nervous, and their being inflamed or implicated in the disease, and, perhaps, upon the kind of nerve affected; for instance, the optic nerve being insensible to pain may be the subject of this degeneration without imparting much pain, if it alone be involved. Dr. Carswell thinks the presence of veins on its surface depends on the fungus exerting a pressure on the large veins beneath; but may not these be occasionally new formations—part and parcel of the morbid growth? for it is not uncommon to meet with very large tumours over the site of considerable veins, which were manifestly superficial veins. I consider these remarks to possess some importance, because fungus hæmatodes will frequently, at the commencement, appear very like a steatoma, especially if unattended by pain. The influence of measures adopted with the object of dispersing these tumours, is very singular. J. B. was calomelised and leeched, and the tramper bled and salivated, after which they both suffered a much more rapid increase. Dr. Thwaite, in the relation of a case published in the last number of the *Dublin Journ. of Med. and Chem. Science*, also mentions, that after the application of a blister the fungus grew very fast.

The tumour removed from J. B., on inspection, presented at its base an organisation not unlike the cineritious substance of the brain, somewhat indurated; on cutting towards the summit, its structure became more diffluent and hæmorrhagic, with small clots of blood interspersed. We might, therefore, denominate this disease medullary sarcoma, cephaloma, spongoid inflammation, soft cancer, or fungus hæmatodes.

(*To be continued.*)

ON THE NATURAL AND TOXICOLOGICAL HISTORY OF THE LILACH OF THE ANTILLES, THE MELIA SEMPERVIVUS, WITH A CHEMICAL ANALYSIS OF ITS FRUITS.

BY J. E. RICORD, OF MADIANNA.

(*Extracted from the Fifth Memoir of the Toxicology of the Antilles.*)

Hippocrates and Theophrastus gave the name of *melia* to the ash.

The lilach of the Antilles is of the class and order Decandria Monogynia of Linnæus, of the family of the Meliacæa of Jussieu.

This beautiful shrub, a native of Syria, Persia, and the East Indies, is one of those plants, the roots and fruits of which are considered poisonous in Guadaloupe and some of the neighbouring islands. There is scarcely an inhabitant who does not speak with dread of it before his slaves, lest they should be

aware of its properties. This is, doubtless, owing to the opinion that the common azedarach (the Melia azedarach of Linnæus), commonly called the lilach of the Indies, or the mangousier of Lamarck, and of which the Melia sempervivus is only a variety, according to some botanists, is poisonous. "It is supposed that the pulpy wood of this tree," observes De Lamarck, "is fatal to man and dogs."

"We are still completely ignorant," remarks M. Alibert, "of the chemical properties of the azedarach; it would, however, be interesting to examine the poisonous principle which exists in many parts of this tree. The use of the fruit, and especially of the roots," he adds, "is not without danger."

"Because, under a temperate sky, animals have partaken of the berries of the azedarach without inconvenience," says M. Déscourtilz, in the 1st vol. and 12th livraison of the Flore Médicale des Antilles, "we must not conclude that it does not act as a poison at the torrid zone: too numerous experiments have proved the toxicological properties of the pulp of the berries of the azedarach. Six or eight, taken fresh, excite nausea, convulsions, grinding of the teeth, and sardonic laughter. The body is soon covered with a cold sweat; a burning thirst torments the sufferer, which even the desire for sleep does not allay. The excessive vomiting and alvine evacuations prove the fatal impression of this vegetable poison on the viscera. If relief be not immediately afforded, the unhappy victim perishes in torments."

It is very much to be desired that M. Déscourtilz himself had made experiments on the fruit and roots of the azedarach, of which he speaks; it is apparently the *bipinné*, and not the Melia sempervivus.

It would appear that father Nicholson, who speaks of these fruits in his Natural History of St. Domingo, paid scarcely any attention to the tree which bears them. He calls it the *lilach*-syringa, of the class and order Diandria Monogynia of Linnæus. The description he gives of it corresponds with the lilach of the Antilles, the Melia sempervivus, which, as it has been already remarked, belongs to the class and order Decandria Monogynia of Linnæus. He says, that "it is pretended that the fruit of this tree, taken internally, is a slow poison, used sometimes by those slaves who are anxious to get rid of their masters."

I believe that this author did not take more trouble to ascertain the class and order of this tree, according to Linnæus, than he did to discover if the fruit were really deleterious. And such, I consider, to be partly the source whence arises the fear inspired by this beautiful tree, which would otherwise be more frequently the ornament of our gardens, on account of its elegance, and the rapidity with which it grows, no matter what its situation, or what the nature of the soil.

Although in Europe, according to M. De Lamarck, this tree seldom rises above eight or ten feet high, at Guadaloupe it may be seen reaching to the height of twenty feet. In the December of 1819, I planted some seeds, and, in the March of 1822, the trees which were raised from them were fifteen feet high, and bore flowers and fruit.

The lilach of the Antilles is not a tufted tree: its leaves are fasciculated, arising from the extremity of the branches; they are alternate, bipinnate, having pointed, oval, serrated petiolæ, four or five in number, are of a fine green colour, of an herbaceous odour, and slightly bitter taste.

The flowers arise from common peduncles, eight or nine inches long, axillary, and in straight clusters from the tops of the branches. The petals are five in number, oblong, four lines long, of a mild violet colour. The stamens are united in a cylindrical tube, with ten teeth. The anthers are turned back on the internal surface of these teeth. The stigmas are capitated (*en tête*). They are of a blackish violet colour, about three lines long, and contrast agreeably with the pale colour of the petals. The calyx is very small, and has five divisions; it is attached to a proper peduncle, about fourteen lines in length. The odour of these flowers is very agreeable, and very much resembles that of the common lilach (*Syringa vulgaris*).

Lémery said that the decoction of these flowers was aperient, dessicative, and deobstruent; but, as in the time of Lémery, the origin of these obstructions was not known, we must not place confidence in any deobstruents he recommends.

Dr. Alibert says that numerous facts prove the anthelmintic powers of the azedarach; and

Dr. Valentine has seen it extensively used while he was in America.

The drupa, or fruit of the lilach of the Antilles, resembles a small olive. When it is ripe, it is of a greenish-yellow colour. It has a five-lobed kernel, with five seeds. Its taste is sweetish, but mixed with a slight bitterness, that renders it disagreeable.

Some individuals pretend that these fruits, when ripe, made into a paste with oil of olives and salt, form an excellent ointment for the itch.

The pulp of the fruit of the Melia sempervivus is used in Persia, according to the celebrated botanist, André Michaux, in the treatment of the itch and of tinea. That part which surrounds the kernel is used, mixed with lard, in friction. M. Déscourtilz says, that the oil drawn from this fruit is considered a vulnerary.

The common azedarach (*Melia azedarach*), is also found in gardens at Guadaloupe. I have cultivated it in my own with perfect success. I have just given the opinions of the very learned authors whom I have quoted, relative to its toxicological properties. Nevertheless, Orfila does not speak of it in his excellent treatise on the poisons, so that I am induced to think that he does not consider it deleterious.

The two other species of this kind are, 1st, the *Azedarach composita*, and, 2nd, the *Azedarach azadriachta* (Persoon), which are not cultivated at Guadaloupe, as far as I am aware of.

These trees are indigenous in the East Indies.

Experiments made with the different parts of the lilach of the Antilles (*Melia sempervivus*, Linn.), prove that this tree has not any deleterious properties.

Exp. 1st.—Two drachms of the gum which exudes from the trunk of this tree had not any effect on a young dog, and another dog had an ounce without injury.

Exp. 2nd.—An ounce of the leaves, beaten into a mass and mixed with a little water, did not produce any effect on a very young dog, neither did two ounces, which were subsequently administered in the same manner.

Exp. 3rd.—Two ounces of the ripe fruit, beaten up with the kernels, were given without effect to a young dog; and another also took two ounces without inconvenience. An hour afterwards he ate with appetite. I repeated this experiment with larger doses, but without injuring the animals to which they were administered.

Nevertheless, in the Dictionnaire des Sciences Médicales, it is said,—"It appears certain from several experiments that the ripe fruit of the melia is fatal to dogs." But who made the experiments?

Exp. 4th.—I have myself taken two of these fruit, which I found very unpleasant, but not injurious.

Exp. 5th.—A young negro, 6 years old, has eaten upwards of fifteen without inconvenience; so that it is evident that the fruit of the Melia sempervivus are not deleterious in a hot climate.

Of the Root of the Lilach of the Antilles.

This root is covered with a reddish bark, which may be readily removed. Its wood has a dirty-white colour; its odour resembles that of the leek; and its taste is bitter, acid, and very disagreeable. I made a decoction with eight ounces of the root and a pint (livre) of water, boiled down one half.

Exp. 1st.—I gave two teaspoonsful of this decoction to a middle-sized dog; an hour afterwards, no effect being produced, I made him take four spoonsful more, which did not affect him. I then administered eight spoonsful, and two hours afterwards released the dog, which, not having eaten since the preceding evening, immediately devoured some bread I gave him, and continued quite well.

Exp. 2nd.—I made a very strong decoction with a pound of the fresh roots. I then beat up another pound in a mortar, and poured the boiling decoction on the roots thus reduced to a paste. Several large doses of this preparation, given to some young dogs, had not any effect upon them.

Exp. 3rd.—I myself took two teaspoonsful without inconvenience. It had a bitter, disagreeable taste, resembling the leek.

Exp. 4th.—I have also given the bruised drupa of this tree to several animals without any bad effects. So that from these experiments, it may be considered that the lilach of the Antilles is not more poisonous in the torrid zone than under a temperate sky.

Chemical Analysis of the Fruit of the Lilach of the Antilles.

(Melia Sempervivus.—Linn.)

1st.—180 grammes of the ripe fruit have been made into a paste, and exhausted by repeated applications of cold alcohol at 36°. The alcoholic liquids were then mixed together and strained; the tincture thus obtained was of a greenish colour.

2ndly.—This liquid was then gently evaporated in a porcelain capsule; it became thick, and there floated on its surface an oily substance, of a deep green colour, an aromatic odour, and an excessively bitter, acrid, and disagreeable taste. This substance weighed about five grammes.

A.—It reddened turnsole paper. B.—Was soluble in alcohol. C.—Insoluble in water.

This proved to be the chlorinite, or green resin, the colouring matter of plants, according to Desvaux, combined with a little fat oil.

3rdly.—The liquid which remained in the capsule, after the chlorinite had been removed, was of the consistence of syrup, of a sweetish, disagreeable taste, an aromatic odour, and brown colour. It is indicated by the letter X.

4thly.—This liquid X, filtered through paper, left a brown substance on it, which, although exposed to the air for twenty days, did not dry. It continued of the consistence of butter, and possessed a very aromatic odour. It weighed one gramme and five decigrammes. It is indicated by the letter Z.

A.—A part of this substance Z was washed with distilled water, which was strongly coloured by it, then, allowing it to rest, a precipitate of a brown powder, weighing four decigrammes, occurred; this proves to be a resin, soluble in alcohol, insoluble in water, reddening turmeric paper, having a slightly bitter burning taste, and an aromatic odour. The part soluble in water, from which this resin was precipitated, no longer reddened turmeric paper; alcohol rendered it turbid; it was a mucous substance, weighing a decigramme.

5thly.—The liquid, whence the substance Z was obtained, now weighed eight grammes. It was semi-transparent, and of a brown colour. Having been kept in a capsule for a fortnight, it became thick, and lost two grammes by weight; is completely soluble in water and alcohol, the solution of a yellowish colour; on the addition of tannin, a precipitate ensued, which induced me to believe that it was the sarcocolla *, and moreover the action of certain re-agents served to confirm me in that opinion. Sulphuric acid turned it of a deep brown colour; potassæ produced a clear green, and magnesia also; the perchloride of mercury did not cause any change, but the subacetate of lead caused an abundant whitish precipitate. The liquid remained limpid.

N. B. It may thus be seen that the oil obtained from the fruit of the melia treated by alcohol was in very small quantity, since very little was found combined with the chlorinite and the substance X. Nevertheless, M. Déscourtilz, in his Flore Médicale des Antilles, says,—"These berries contain a concrete oil, of which bougies are made in Persia and Syria, and which is also used in painting." When speaking of their medicinal properties, M. Déscourtilz adds,—"The dried and pulverised leaves, joined with the oil of the fruit, form an ointment used in convulsions, spasms, and nervous pains."

Treated with Distilled Water.

1st.—The remains of the fruit, exhausted by the alcohol, were macerated in water, which was then strained through linen, and fresh water poured on until it came quite clear. The remains are indicated by the letter V.

2ndly.—The different waters, mixed together, were then strained through paper, and another residue obtained, marked X. The filtered liquid was of a light-green colour. This reddened turmeric paper deeply. The peroxide of iron and the tincture of galls were added, but no change was produced. On the addition of alcohol, some small, white, and brilliant globules appeared, which remained

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* "The sarcocolla is almost equally soluble in water and alcohol: the solution is of a yellow colour. The most remarkable property of the sarcocolla is that of forming a precipitate by tannin."—*Thomson's Chemistry*, vol. iv. p. 39.

suspended in the liquid for some time, and then united in a mass on the surface. Neither ammonia nor sulphuric acid had any effect; but the subacetate of lead produced a very abundant coagulum. The rest of the liquid thus tested was evaporated to dryness; the residue was of a greenish colour, an agreeable aromatic odour, a disagreeable taste, but neither acrid nor bitter, of the consistence of lard, resembling transparent jelly, and not drying, although exposed to the air for a long while. It weighed eight grammes*. Alcohol dissolved it partly (*la chlorinite*); the spirit obtained a green colour. The precipitate was a brown substance, resembling soft wax, quite soluble in water, without smell, melting in the mouth, of a slight acid taste, and precipitated from its aqueous solution by alcohol. It is a kind of gum.

Of the Residues marked V *and* X.

The residue V dried in the sun, weighed seventy grammes; and that remaining on the filter, marked X, weighed ten grammes.

These two substances were mixed together, washed with water, and then passed through a hair sieve, on which all the pieces of the fruit-kernels which had not been well mashed were left. This operation having been repeated several times, a reddish, insoluble substance was precipitated, to which a few drops of tincture of iodine were added, and produced a beautiful violet colour, indicating the presence of amylaceous fecula. This fecula was mixed with earth and other impurities, which had not been properly separated. The mass from which this fecula was obtained, after being dried in the sun, weighed fifty grammes. It had an aromatic and oily smell. Pulverised and treated with boiling alcohol, it furnished two grammes of a fat, greenish oil, containing a little chlorinite.

N.B. 180 grammes of the ripe fruit of the Melia sempervivus, well dried in a stove, were reduced to 80 grammes; 100 grammes of water then had evaporated.

The results of this chemical analysis are, that 180 grammes of the ripe fruit of the Melia sempervivus consist of—

1.	Water evaporated by the dessication of the fruit	100·0
2.	Chlorinite	5·0
3.	Resin	1·2
4.	A species of sarcocolla	6·0
5.	Mucus	0·3
6.	Gum	10·0
7.	Amylaceous fecula	7·0
8.	Fatty oil	2·5
9.	Woody fibre	46·0
10.	Traces of acetic acid—loss	2·0
		180·0

* The quantity of the liquid employed with the re-agents was a fifth of the whole, thus giving two grammes more.

Reviews.

Cases of Tic Douloureux, and other forms of Neuralgia. By John Scott, Surgeon to the London Hospital, &c. &c. pp. 52. Longman. 1834.

Tic Douloureux is one of the most painful and distressing affections which "flesh is heir to;" and he who discovers a remedy for this disease, one which, in all cases and under all circumstances, is found successful, will not only obtain the gratitude of the afflicted, but ensure to himself a solid reputation. When Mr. Hutchinson announced carbonate of iron as a remedy for this disease, wherever his observations became known, that preparation was employed, and the concurrent experience of practitioners has stamped it as an invaluable agent. The majority of cases of neuralgic affections are removeable by iron; but there are, nevertheless, cases so inveterate as to have hitherto baffled every attempt at their removal. The carbon. ferri in enormous doses, as much as an ounce every four or six hours, has been given and failed. The liquor arsenicalis was vaunted as a remedy, but enjoyed only an ephemeral reputation. Abernethy's blue pill system has been fairly tried, but frequently without success. Various local applications have been used to the affected part, but often without any avail: leeches, blisters, the nitrate of silver, potassa fusa, plasters of belladonna, and a long catalogue of other articles. Even the division of the affected nerve, and the removal of a portion of it have been made, yet affording but temporary relief. The sufferers from this malady will surely hail with delight Mr.

Scott's plan of treatment, which he has found so eminently successful. Let us see if the author can enlighten us on the pathological character of the disease, if he has unveiled the mystery, and also has discovered its cause. We have presented to us a long detail of the symptoms, which would not be interesting to our readers; these we shall pass over. Mr. Scott assigns six causes for this disorder, depending chiefly upon some abnormal state of the constitution. First, "plethora of the system," the least frequent cause; second, "an asthenic condition of the system;" third, "a gouty and rheumatic diathesis" he regards as a predisposing cause; fourth, "derangement of the digestive organs;" fifth, "malaria;" sixth, "local irritation." Each of these causes was known and acknowledged before. But we have seen the affection arise in individuals apparently in the plenitude of health, and in which each and all of these causes were absent. The digestive organs, we feel persuaded, are too often accused of delinquency. Men are now beginning to dissent from the Abernethian code, and find that disease is not invariably induced by one single cause, but results from an infinite variety of causes. Sudden pain will annul the appetite, and long continued pain will disturb the whole system; in which, of course, the digestive apparatus must participate; so that, instead of disorder in this apparatus being always the antecedent to nervous affections, it may frequently be the sequent. When the symptoms put on an intermittent and periodical character, Mr. Scott refers the disease to malaria; perhaps justly, but the position would be difficult to substantiate. Now for the pathological conditions. We are told that tic douloureux affects the nerves of the face; that it may exist in one or more of the great divisions of the fifth pair; be confined to their roots, where they emerge through the bony foramina, or be displayed in their filamentous interlacements; and, if confined to one of the divisions of the fifth, it may extend ultimately to the inosculating branches of another. The muscles supplied by the affected nerve may become spasmodically contracted during the paroxysm of pain, accompanied with throbbing of the arteries of the part, &c.

The author believes the disease to depend on an inflammatory condition of the nerves. We now come to the treatment, the most important and only useful matter in the treatise. The digestive organs are to be regulated, and means for invigorating the general health are to be adopted. "Some years ago," says Mr. Scott, "when I was trying the efficacy of the local influence of mercury in arresting chronic inflammation of the various structures of the body, with a view to illustrate the treatment of diseased joints on this principle, I met with several very obstinate and protracted cases of tic douloureux, which had resisted every remedy that could be devised, and I determined to subject them to that mode of treatment, which I had found so successful in what I believed to be a similar condition of other textures." The author then says that he adopted the plan of applying an ointment, on a piece of flannel, composed of a drachm of tartarised antimony, and an ounce of mercurial ointment, to the part affected, renewing it as often as it could be borne, "the object being to produce such a degree of irritation on the skin as would ensure the mercurial influence on the part." This mode of treatment proved eminently successful. Mr. Scott was subsequently induced to use the iodurets, and particularly the deuto-ioduret of mercury. He relates several highly interesting cases, in which this remedy was of the utmost value to the patients, producing its good effects more or less quickly, according to the duration and inveteracy of the disease. The author expresses a hope that the profession will not imagine he here recommends any specific for this disease, which, as it arises from many different causes, and occurs in people who possess the most opposite diathesis, cannot, of course, be applicable in all cases, whether arising from constitutional or local causes. "When," says Mr. Scott, "the disorder is kept up by constitutional influence, instead of endeavouring to give relief by opiates, it is much more advantageous to alter the condition of the nerve in the manner I have mentioned, which will speedily alleviate the pain, at the same time that your attention is directed to the removal of the constitutional derangement, which, otherwise, would certainly induce a recurrence of the affection, as soon as the local treatment ceased to be employed." "In those cases," he adds, "in which the disease depends on local

causes, it will yield to local treatment, and the subsidence of such constant pain will be speedily followed by a surprising renovation of the health." We certainly recommend this treatise to the attentive perusal of our readers. It contains the results of experience, and is the production of a sound practical surgeon.

A Treatise on that Affection of the Joints denominated Arthritis or Gout. By Lewis Leese, M.D., M.R.C.S., &c. 8vo. pp. 48. 1834. Highley.

Dr. Leese takes a retrospective but concise view of the various opinions entertained on the subject of gout, from almost the earliest records of medicine up to the present period. There are so few tangible points in this treatise, that we have considerable difficulty in distinguishing those which are valuable. The motive which induced the author to publish it is a laudable one; it is that of offering to the world the results of a long experience, as well on his own person as on other individuals. We will present his views on the pathological conditions of the disease.

"Gout," he says, "may be defined an inflammation, more or less in degree, of the ligamentous, tendinous, or cartilaginous structures of some one or more joints of the body; its first attack is most often in that joint of the great toe next the metatarsal bone, and, moreover, is generally discovered early in the morning, before leaving bed, and is sadly confirmed on placing the foot on the ground when rising."

Experience is a much abused term. A mariner, unacquainted with nautical science, may cross the Atlantic Ocean fifty times during the course of his life, and yet be ignorant of the objects or of the countries which he has so frequently passed. He may, nevertheless, have a faint recollection of the course which he has so often traversed, and in the absence of a pilot might possibly, by this simple experience, reach in safety the destined port. But without any knowledge of navigation,—ignorant of the use of the compass,—he might, in the event of a storm, be tossed to and fro by the mighty waves of the deep, driven out of his natural course, thrown into unnavigable seas, and destruction be the inevitable consequence. This is the character of men who profess to be simply men of experience; unguided by the beacons of anatomy and physiology, on the occurrence of an anomalous disease, or an anomalous symptom, they would be like the mariner unacquainted with the compass.

Dr. Leese enumerates three of the structures which enter into the composition of a joint; if he had given but four more, we should have had a full account of its components. From his statement we are of course to infer that the ligaments, the tendons, or the cartilages, are involved in an inflammatory process, which constitutes gout. Those are the only pathological observations contained in the treatise. Our author's treatment consists in the application of leeches to the affected joint, the constant application to the part of liquor ammoniæ acetatis; sometimes a liniment composed of tincture of opium and oil of almonds, and the internal administration of the vin. sem. colchici, in the dose of from thirty to forty drops every eight hours. Occasionally, a dose of opium to assuage pain and procure sleep. When lithic concretions are deposited around the joints, the author has found the carbonate of soda, in the dose of ten or fifteen grains, exhibited twice a-day in milk, a remedy which, he says, seldom fails to remove them. He recommends the disuse of wine and spirits—advice which of course his patients listen to with profound attention, and observe during the period of a violent paroxysm, but no longer. In the last page we perceive four formulæ, embodying the remedies we have noticed. We have given every practical observation which is contained in this "treatise." We cannot conscientiously recommend the book to our readers, and fear only the indignation of Dr. Leese in having copied so much.

DISEASE SIMULATING CHOLERA AT GOTTENBOURG.

A disease resembling cholera has broke out at Gottenbourg and its environs, to which forty-three persons have fallen victims in the space of six days. Five physicians have been sent from the College of Health to examine and observe the progress of this disease. Up to the present time not the least apprehension or suspicion of contagion has been manifested.

THE

London Medical and Surgical Journal.

Saturday, September 27, 1834.

ADDRESS TO MEDICAL STUDENTS.

The purlieus of the various Medical Schools and Hospitals are beginning to fill. The Lecturers are sounding their trumpets, in the form of advertisements, prospectuses, with all their paraphernalia, and the Pupils are anxiously reconnoitring to find the most useful and the most commodious school, before fixing their encampments. It becomes a part of our duty as journalists, to offer them a few suggestions. The style in which they are presented is, we believe, new; we deviate from the accustomed routine of personal invective and general abuse, knowing well that it could answer no useful purpose, but might excite jealousy between teacher and pupil, and subsequent discontent. The following remarks will, we are sure, be kindly received by every sensible student. There is unquestionably no period in the life of a medical man so momentous as that in which he is devoting his last two years to the attendance on Lectures and Hospital Practice. It is an epoch which frequently stamps his destiny in future life. Steady habits, and close application to study, combined with a love of the science of medicine, seldom fail to continue with the possessor during his subsequent life, as well as obtaining for him respect, an honest livelihood, and reputation as a practitioner. But if he idles away his time in dissipation, neglects his studies, and injures his health, poverty, misery, and degradation are generally the consequences. By such a course, he omits that almost only period when his mind can receive the necessary elementary information, that frame-work of knowledge, upon which experience can afterwards be securely based. In the lecture-room he may learn the principles of his profession, the laws and agents which govern and regulate the human frame, both in health and in disease, or at least the most received notions which are entertained. In the dissecting-room he studies the healthy structures of the body; in the hospital, the aberrations of function and the changes of structure; he notices the operations of different medicinal agents, and in the event of death of the patient, he is enabled to associate the symptoms during life with the morbid alterations of structure.

The most intense application is demanded, alike by the community for the benefit of science, and for capacitating the individual to discharge his professional duties conscientiously. "In no department," says Wardrop, in his Life of Baillie, "do men rise to eminence who have not gone through a severe course of study and elaborate preparation." "It is the cultivation of the mind alone which elevates to distinction." This is an useful lesson. We most cordially acquiesce in the sentiments. The course to learning and distinction is along the path of honest industry. The crowned monarch, no more than the humble student, has discovered any other. It is an old adage, that "there is no royal road to geometry," —there is none to medicine. Medical science is unequalled in its latitude. It embraces the whole domain of the physical and mental worlds. Every thing that lives and moves, on the earth or in the seas, the ground we tread upon and the air we breathe, are all brought within its scope, and the knowledge obtained thereby can be converted to useful purposes.

Let us then entreat the Medical Student,

whilst pursuing his studies, whether in this metropolis or in others, or in the provincial schools, to lose no opportunity of availing himself, *now*, of useful knowledge,—of that knowledge which he may have soon to apply when embarking in practice. We have seen something of medical practice—of the nature of early impressions; we have seen the meritorious student surrounded with an halo of respect, acquire opulence and fame; and the dissipated and the ignorant receive his justly-merited disregard and contempt. All cannot equal a Hunter or a Bichat. Few, perhaps, are endowed by nature with mental elements in such an abundance; but there are few who do not possess a sufficient capacity to enable them to obtain honourable distinction. The labourer who carries the materials is equally as essential an individual as the builder of the fabric.

If we inquire into the career of men of distinction, whether at the present day or in past history, we find that in early life some mental peculiarity was displayed, that they were known and recognised by their talents or by their industry. If we refer to the members of our own profession, we discover that they laboured in the dissecting-room, were regular attendants on lectures, watched the sick at the bed-side, whilst many of their fellow-students were revelling in a theatre or tavern. At the present day, when science in all its branches is making such rapid progress—when learning is being diffused through the mass of the people—the medical man becomes compelled to use extraordinary exertions, to sustain the position—the high character of his profession. Where competition in medical practice is so great, the most uncommon industry is necessary to enable man to emulate his neighbour. Without this elementary knowledge, despite of every after exertion, despite of the most extensive experience even of a long series of years, one man may be easily outstripped by a competitor who may be better acquainted with the rudimentary knowledge of his profession. Genius, that god-like endowment—that pre-eminent privilege, possessed but by few, may, and is, developed occasionally in early life. It is a power granted but to few; yet its precocious appearance is frequently prophetical of early dissolution, and often to be lamented. Shakspeare, that master of human nature, embodied the axiom,—"So wise so young, they say, do ne'er live long." Bichat, in our estimation, was, perhaps, never excelled; and his premature death affords the most presumptive proof of the verity of the axiom. But talent is the prerogative of many,—it is a quality impressed upon many minds, and it is one that almost every person may attain by close, constant, and unintermitting exertion. In the practice of medicine, such a quality should hold pre-eminence: no man devoid of this attribute should be allowed to prescribe for the sick—to hold, as it were, the strings of life in his hand.

With, what place, at what particular school, or under whom, Pupils should conjoin themselves, is not our business to recommend. But, in the performance of our already professed duties, we are bound to offer some general suggestions. We state, now is the grand period, now is the time when the great preparation is to be made for future practice, and the foundation for future renown. Information is your object; therefore enter to that school where your object can be most completely attained. Neither let name nor locality, "low fees," nor high-sounding titles, private or incidental circumstances influence you; "enter" where the most information can be acquired. The large schools contain one great ad-

vantage, viz.—that all the lectures are usually delivered under one roof; so that the Pupil has not to travail from one school to another, for chemistry, or for surgery, or for any other subject. The disadvantage attending a large school is in the largeness of the *fees*, and one which some few pupils cannot overcome; then there is, of course, no alternative but entering to the minor ones where the fees are low.

Between the Teacher and the Pupil there exists a mutual interest. The Teacher, on the one hand, is presumed to possess, and to be able and willing to communicate to his Pupil, in the best possible manner, that knowledge which he has himself acquired on the subject upon which he treats; and, on the other hand, it is the bounden duty of the Pupil to listen and receive that instruction, not only for his immediate necessities, but that he may be able to apply that information during his future professional career. Independently of these reasons, the Teacher has a claim on the Student, from his acknowledged superiority of acquirements, his seniority and rank in the profession. The Pupil has paid his money for this instruction, and if he be honest to himself, be this instruction not afforded him, it becomes his duty to complain. But instead of making a public announcement of such neglect, we would advise him to wait on the lecturer, to act like a man and a gentleman, request the better performance of his duties, and failing in this, demand a return of the fee that has been given.

We announce with great pleasure that Dr. Wilson Philip has been elected a Fellow of the College of Physicians. His splendid talents and his industry have won for him the honour. The College should be proud of the accession.

Foreign Medicine.

Homœopathy.

Dr. Marcq, of Charleroy, in a letter addressed to the editors of the *Bulletin Médical Belge*, says, "I cannot believe a single atom of sulphur or any other medicine can do any injury. I believe that all the wonders of homœopathy are to be ascribed solely to the neglected influence of diet, regimen, rest, and the influence of the imagination. He also believes that homœopathy has done some good, inasmuch as it has taught us the use of the *médecine expectante*, and the inutility of employing such a quantity of therapeutic agents." Such is his *credo*, but he sees no difficulty or wrong in experimenting on himself with these minute doses, or on those patients who would require only a proper regimen. He adds, that, when he has seen the smallest atom remove the most violent disease, he will no longer doubt, but will say, if asked to explain such a wonder,—*Demandez-le à ce Dieu, qui nous donna la vie.*

On the Contagion of the Ophthalmia which was epidemic in the Belgian Army.

Dr. Vansevendouch, an old medical officer of the garrison of Brussels, but not engaged at present in service, has written an amusing and interesting article in the *Bulletin Médical Belge* on the epidemic ophthalmia. He gives a short historical sketch of the previous epidemics of a similar nature, showing that, whenever the ophthalmia broke out, the dress of the military had been previously changed; as, for instance, in 1814, the Batavian and Belgian troops wore regimentals made according to the old Batavian and modern French style, a comfortable and wide dress; in 1815, this was unfortunately changed for uniforms in the Russo-Prussian style. The Belgian militia, although composed of young, healthy men, were among the first to suffer from this measure, and were almost immediately decimated by the epidemic. Dr. Vansevendouch strongly denies the existence of contagion in this complaint: he considers it a complete nullity, and is of opinion that the change in the uniform is the sole cause of the affection. He closes his paper with the following notice to contagionists. He says,—"Three-fourths of the soldiery have furlough for eleven months in the year, and a fifth are discharged an-

nually. What is it has prevented these thousands of infected individuals, in constant contact with their fellow-citizens, from making Belgium a cloaca of infection, and a kingdom of the blind, governed by a blind monarch?

Preparation of Mercurial Ointment.

It has long been a subject of complaint that no substance has yet been discovered which will mix speedily with mercury in making the ointment, without injuring its medical properties. M. Dorby, a pharmacien at Crépy, has lately published, in the *Journal de Pharmacie*, a formula for preparing it, which will shorten considerably the time used in the operation. He says, that the lard to be employed must be melted, and then poured into a large vessel; to be afterwards placed on a hair sieve, and preserved in a dry place where the dust cannot get at it. At the end of fifteen or twenty days it will soon mix thoroughly with seven or eight times its weight of mercury; and the more rancid it becomes the greater is its power for incorporating with the metal; so that at the expiration of a few months it will incorporate readily with thirty-two times its weight of mercury.

Prize proposed by the Société des Sciences Physiques, Cliniques, et Arts Agricoles et Industriels de France.

To ascertain by numerous and well-authenticated facts what action the imponderable fluids (namely, caloric, light, and electricity) exert on the human frame; and what influence they, as also the atmospheric air, have in the production of certain diseases, namely plague, yellow-fever, cholera, &c.

The prize will be a gold medal, of the value of 500 francs.

The works or essays must be sent, carriage free, before the 1st of May, 1835, to M. Julia de Fontenelle, Perpetual Secretary of the Society, Rue Saint Andrè des Arts, No. 58, or to the President, M. Labarraque, Rue Saint Martin, No. 69, Paris.—*Journ. de Pharm.*

MOLLITIES OSSIUM.

A most remarkable case of this disease was observed a short time since in the dead house at the Hospital of La Pitie—every bone in the body had become completely cartilaginous, and the articular portions of the extremities were altogether absorbed: a more particular account of this curious case we will give hereafter.

Foreign Hospital Reports.

HÔPITAL DE LA PITIE.

M. Dieffenbach's method of performing the Taliacotian operation.

This celebrated German surgeon has for some length of time been visiting the different hospitals of Paris. The surgeons of this hospital have selected several cases, to observe the success that has attended the improvements made in the rhinoplastic operation by this surgeon. Amongst the cases selected, was a woman, who from a disease resembling the one designated noli me tangere, had lost the integuments and cartilaginous portion occupying the walls of the nasal cavities. A restoration of these parts was undertaken by this able surgeon. The following were his different manœuvres in the course of the operation. The part intended to form the flap, was first traced in the usual way by ink. Then with a scalpel he speedily dissected the flap from its surrounding parts, this was held by an assistant, who kept the patient's head upon his knees; afterwards, with the same dexterity, he divided the integuments which covered the root of the nose, in order to engraft the pedicles of the flap. The lateral parts of the nasal cavity were then pared, and the root of the lip traversed in different parts at its union with the anterior nasal spine. The edges of the wound of the forehead were then brought together, and retained by means of suture. The pedicle of the flap was then twisted on itself, and was engrafted between the new cut edges of the skin on each side of the root of the nose, and needles were introduced to prevent the retraction of this portion of the flap. The appendix destined to form the septum was then fixed in the groove made on the superior lip, and maintained also by means of needles. The flap now formed a kind of veil floating before the nasal cavity. The lateral borders were next inserted in those of the circumference of the opening, and kept in this position by means of the twisted suture, many of which were applied on both sides. The points of the pins were cut close to the wound, and lint was placed in the nasal cavities, so as to ensure a proper form to the new made nose.

The operation lasted about half an hour,

during which time the patient suffered from the greatest agony, but the whole proceeding in the operation was performed with the greatest skill and dexterity. There was but slight hæmorrhage, and the patient bore the operation with great courage.

M.M. Velpeau and Lisfranc witnessed the operation; several medical men were present, all of whom appeared pleased, from the masterly manner in which the operation was performed.

GERMAN HOSPITAL REPORTS.

CLINICAL REMARKS BY DR. LIEBENHAAR.

Case I.—*Complete paralysis of the inferior extremities, which gradually supervened.*—In this tedious complaint several remedies had been employed, amongst others animal magnetism, the leaves of the savine tree, acetate of strychnine, &c., without the least benefit. Moxæ were employed after a certain extent of time, and mild baths were prescribed, which, after being persevered in for several days, completely eradicated the disease.

Case II.—*Steatomatous tumour of the Breast, and perforation of the Intestines by Ascarides.*—In this case the child was 12 years of age, of scrofulous diathesis, and died from ascites. On the autopsy, the small intestines were found perforated in five or six different places, and in these small wounds were observed a number of ascarides; others were observed in the abdominal cavity. Several other small round holes were observed in the intestines, the perforations corresponding to the size of those worms; the intestine, moreover, was slightly thickened. The author appears doubtful whether the worms made these cavities before or after death. We give this observation, as it is thus far interesting; many others have denied the possibility of perforation of the intestines by these worms, especially the celebrated Rudolphi.—(*Vermium Intestinalium Historiæ Naturalis*, vol. i., page 430.)

Case III.—*Efficacy of Animal Carbon in a case of Induration of the Pancreas.*—Anne ——, 36 years of age, of weak and lymphatic constitution, whose father and mother had died of phthisis pulmonalis, was admitted into the hospital under my care, in Jan. 1833. In the summer of 1832, she stated that she had frequently suffered from shooting pains in the chest; in the December following, her menstruation ceased, after which the pain in her chest became more acute, and this was accompanied with a sense of constriction in the epigastric region, constant nausea, and frequent vomiting supervened; had an unpleasant taste in her mouth, also slight expectoration.

On the 30th Jan., when I saw her, the following was her condition:—great emaciation, eyes sunk in the orbits; pulse soft, quick, and feeble; skin dry and flabby; epigastric region painful on pressure; tongue white; anorexia; stomach felt hard, as if firmly contracted. Her urine deposited an abundant whitish-yellow sediment; spat frequently; there was a peculiar fœtid odour exhaled from the mouth, something similar to that of mercury; her sleep was disturbed, and she complained of a cold sensation in her mouth and about her neck; much depression of spirits.

The prognosis was, of course, extremely doubtful, in consequence of her hereditary disposition. Twelve leeches were ordered, and six grains of the extract of hemlock were prescribed.

I continued to prescribe several medicines, amongst others frictions of the iodine ointment; some of the symptoms were relieved, but new ones supervened that caused me to suspect suppuration of the pancreas. On the 19th of March, as soon as all symptoms of irritation had ceased, I prescribed some animal carbon, according to the method adopted by Weisse, two grains to be taken in powder night and morning for five or six days, afterwards increased it to three, mixed with sugar and milk. Under this treatment the patient became much better, tumefaction of the legs subsided, the fever decreased in urgency, her appetite and general health improved, and by the beginning of April, she was well enough to discontinue the medicine, and has since remained in perfect good health.

British Hospital Reports.

ST. THOMAS'S HOSPITAL.

Paralysis Universalis.—Colic from scirrhous state of the Duodenum.—In the last number of this Journal we gave cases illustrating

the different effects from the poison of lead; and as other diseases may give rise to similar symptoms, examples of which we have now an opportunity of witnessing in the same hospital, we cannot do better than allow them to follow the different forms of disease produced by lead. Both the colicky and palsy symptoms, induced from this poison, are produced from very different causes, and at first the symptoms of the latter so much resemble all the characters of the other disease, that, if not quite convinced that the patients had not been near any preparations of lead, the diagnosis would be extremely doubtful. Colic, however, arising from lead, as well as the paralysis attending it, may generally, by judicious treatment, be combatted, the former in the course of a short time, but the latter frequently remains extremely tedious. Colic arising from any organic affection of the intestinal canal, although from treatment it becomes alleviated, scarcely ever yields to the medicaments employed. The features of the patient in these cases are almost sufficient to point out the affection, especially if the disease has existed any length of time; the skin becomes of a whitish yellow, and the circulation is more languid than natural; these symptoms, together with the difference of the excretions, are sufficient to clear up the diagnosis. As to the paralysis, in the primary state, the difficulty is still greater. Both these affections commence in a similar way, either the hands or the legs are the parts first attacked; the same class of muscles lose their motive power, and the nerves of sensation are frequently equally affected. But in the majority of cases arising from the poison, the sensitive power remains perfect, or at least is not induced until the paralysis becomes complete. The extensor muscles of the fore arm, in both cases, are those most frequently attacked. In either case there is no constitutional symptoms, unless from the combination of the colicky symptoms, the constitution has been materially affected. The palsy simulating the paralysis from lead, generally attacks those individuals who, from hard drinking, have so much impaired their digestive organs, that debility is induced, and, from some exciting cause or other, such as cold, for example, the nervous system becomes impaired. The following are examples of these different affections.

Case I.—*Colic produced from Scirrhous State of the Duodenum.*—Thomas ——, aged 42, of lymphatic temperament, admitted into Jacob's Ward; stated, that for six months he had been suffering more or less from colicky symptoms; previous to this time he had enjoyed tolerably good health; had never lived freely, but at times had been in the habit of taking small quantities of spirits. The colicky symptoms, which are rigidity of the different parts of the muscles of the abdomen, accompanied by excruciating agony about the intestinal region, come on at intervals of longer or shorter duration. Feels, during the intervals of spasm, in perfect health. His bowels are always confined, unless acted upon by medicine. No tenderness about the abdomen on pressure; great anxiety of countenance; skin of a whitish-yellow hue; tongue clean. Appetite always bad; after eating any thing, says, for the first fifteen minutes he feels perfectly easy, after which he experiences pain in the epigastric region, and frequently vomits. On his admission, Dr. Elliotson said he suspected there was organic disease in the intestinal canal, and ordered him a drop of croton to be given twice a-day, or oftener if necessary. In this state he continued for upwards of two months; the spasms became more frequent; every thing he took, after remaining on his stomach a short time, was ejected. The croton oil had acted freely on his bowels: it was obliged to be increased latterly to three minims three times daily, for if his bowels were not constantly kept in an active state, he suffered inexpressible torment. Emaciation was great; anxiety of countenance became intense; prostration of strength ensued; respiration remained natural; but the circulating system was carried on with extreme indolence. Complained only of weakness, which at last became so excessive, that he died apparently from exhaustion, after remaining in the hospital two months.

Autopsy.—The whole of the duodenum was found in a complete thickened scirrhous condition, the cavity was so much contracted that the little finger could scarcely penetrate it. The whole of the abdominal viscera were in a complete state of bloodlessness; no other morbid appearance was detected either in the cranial, thoracic, or abdominal cavities.

Case II.—*Paralysis Universalis.*—John Barry, aged 59, of plethoric appearance, was admitted by Dr. Elliotson into Jacob's Ward on the 7th of August last. From his own account he has spent many years in the East Indies, and lived extremely well. Since his return to England he has been obliged to live according to his circumstances, which sometimes were tolerably good, at others very bad; always, however, enjoyed good health. About six weeks previous to his admission, after having finished a hard day's work, and got thoroughly wet, he found a stiffness invade the legs and feet, accompanied with a sensation of numbness. This, after being preceded by a chilly sensation in the part, extended towards the thighs and lumbar regions, and he now had the greatest difficulty to make progression. The next morning, on getting up, he found his arm similarly affected with stiffness and numbness. Felt not the least pain either in the spinal or cerebral regions, and, in fact, his health remained as good as ever, but his whole muscular frame was more or less affected, and remained in this powerless state. On his admission there was want

of power in the extremities, back, and loins; he complained of a sensation of deadness in these parts, and by pinching him, the nerves of sensation were proved to be also affected. Frequently he felt, both in his hands and feet, a pricking sensation. No constitutional symptoms were present, with the exception of slight increase of nocturnal transpiration; alvine dejections and urine natural, but has not the least sensation of his water passing through the urethra; pulse 76, tolerably firm and regular. His head was shaved, a pint of blood extracted from the arm, and a seton was placed in the back of his neck, and ointment, formed with an ounce of the unguentum hydrargyri fort. and a scruple of iodine, was rubbed frequently in the scalp, and he was allowed milk diet. Up to the 15th no alleviation had been procured; the blood extracted was neither buffed or cupped; if anything the numbness had increased, particularly about the thighs and legs. By the 18th the stiffness and numbness were slightly relieved; his mouth now was rather sore from the ointment, and he had also been taking since the 13th, ten minims of the liquor. potass. hydriod., with ten of the tinct. iodinæ, three times a day. The liq. potass. hyd. was gradually increased in quantity; by the 5th of Sept. a drachm, with twelve minims of the tincture of iodine, was taken three times daily; his mouth continued sore, and the ointment was omitted; the sensation of stiffness and numbness had been gradually decreasing, and he appeared to gain strength both in his arms, legs, and loins, for now, by means of a stick, he can walk with comparative ease; appetite good; bowels regular. On the 9th he begged to be allowed a warm-bath daily; this now for some days he has been using, and since certainly has made rapid improvement. The solution of the hydriodate of potass has been increased to 3iss. three times daily; the nerves of sensation appear completely restored; can feel the least prick or pinch, also can feel his water as it passes through the urethra. At present he remains in the hospital; the weakness to a certain extent remains, though the nerves of motion as well as sensation have nearly recovered their usual powers.

WESTMINSTER HOSPITAL.

On Saturday, 13th of September, Mr. W. B. Lynn operated on a man for a fistula, which did not communicate with the gut. The patient is a pale and rather emaciated being, labouring under pulmonary symptoms, which have, however, improved of late. Of course an issue will be made in the arm ere the incision made by Mr. Lynn has healed.

Shortly after a man was brought in for Mr. White to operate on for internal piles. Before he was admitted into the theatre, Mr. White remarked, that he did not intend either to excise the hæmorrhoids, or apply a ligature, as he considered both operations objectionable. He merely intended to scarify them, and was well assured that doing so for a few times would completely remove them. He had learnt this plan of proceeding from a gentleman who had been a sufferer from piles for a long time, and, although not in the profession, had read every book on the subject. He was very averse to either the ligature or excision, but allowed Mr. White to do whatever else he would. The scarifying was successful with him, and Mr. W. had practised it ever since.

The patient was then introduced, and having been placed in the proper position, exhibited three internal hæmorrhoids already protruded; these were freely incised, and diminished in size directly. A little bleeding took place, but of no consequence. A piece of lint was then applied, and he was sent to bed.

A child was next brought in to have the opinions of the surgeons relative to the feasibility of an operation. The child was sent up to Mr. White by a surgeon at Marlborough. It was labouring under the sequelæ of strumous disease, and had all the characteristics of struma in its constitution. The disease had affected the upper jaw, the bone having exfoliated, and the cheeks and lips adhering in parts, so as to prevent the child opening its mouth to any extent. On the right side there was the remains of an extensive ulceration in the cheek, the edges adhering to the jaw, and completely cicatrised, nature not having made any attempt to repair the loss of the soft parts. The articulation of the lower jaw was perfectly free. The little patient was brought to London with the hope of having the adhesions which had taken place divided, so as to enable him to open his mouth properly. Sir A. Carlisle, the only surgeon besides Mr. White then present, concurred with Mr. W. in the opinion that an operation was feasible, but recommended only one side to be done at a time. This proposition having been acceded to by Mr. White, the child was taken away.

Just as Mr. W. was leaving the hospital, he recognised an old man who was waiting outside, and ordered him to follow him to the theatre. He informed the pupils in attendance, that twenty years since he had tied this man's external iliac artery for an enormous aneurism, which afterward suppurated, and required to be laid open in its whole extent. After the operation, the principal vein became varicose, and the limb œdematous. He remarked that it was the first operation of the kind ever performed in the Westminster Hospital. The man's health is now excellent.

APOTHECARIES' HALL.

Names of those gentlemen to whom the Court of Examiners granted Certificates of Qualification, Thursday, Sept. 18th.

William Bailey	Bedford.
Robert Edward Gaye	Shefford.
Thomas Smethurst	London.
Richard Thomas	Penzance.

MISCELLANY OF FACTS.

The Bristol Corporation have given the Institution in Park-street 100 guineas donation, and subscribe 12 guineas annually.

The managing committee of the St. Leonard's (near Hastings) Dispensary have presented (Sept. 15) Dr. Hamond with a handsome piece of plate for his attention to the poor.

A public meeting was held in Glasgow (Sept 19), at which it was resolved to establish a Lying-in Hospital for indigent married females. It is to be called the Glasgow Lying-in Hospital and Dispensary, to be managed by twenty-five Directors, annually chosen; and the professional affairs of the charity are to be intrusted to six or eight practitioners of medicine, of at least ten years' practice, "*without reference to their being members of any medical school or corporation.*" Committees to forward the objects of the meeting were appointed.

The half yearly examinations at the College of Surgeons in Ireland, commence Nov. 13th.

The Lectures and Hospital attendance at the School of Physic, Dublin, commence the 3rd of Nov.

BOOKS FOR REVIEW.

Tiedemann's Systematic Treatise on Comparative Physiology, introductory to the Physiology of Man. Translated, with Notes, from the German, by Drs. Gully and Lane. Vol. I. Boards, 15*s*.

A Treatise on Diseases of the Chest, and on Mediate Auscultation, by R. T. H. Laennec, M.D. Translated from the latest French edition, with copious notes, and a Sketch of the Author's Life, by John Forbes, M.D., F.R.S. With Plates. Fourth edition, 8vo, considerably enlarged and improved, with many additional notes. London: H. Renshaw. 1834.

CORRESPONDENTS.

It is customary for the weekly periodicals to publish a report of the prospectuses of the different schools,—this we have heretofore done; but in the present year we are compelled to deviate in consequence of the immense press of scientific and important matter in hand. We trust that our readers will regard the present contents of greater utility; the advertisements of this and the preceding week, on the wrapper of this Journal, have included the whole of them.

We request Mr. Lee to refer to another part of this Journal, and he will at once see our reasons for not inserting his communication.

Delta.—Our esteemed correspondent shall hear from us.

An Apothecary's Apprentice.—If his master is such an unreasonable and brutish being as he has described him to be, we recommend him to get his friends to interfere. If he has conducted himself properly, *law* will compel his master to give up his indentures as soon as they have expired.

A Guy's Student.—We are not aware that Dr. Blundell is going to give a course of lectures, at least he has not at present made it known.

X. W.—We recommend him by all means to pass the Apothecaries' Company.

A Lover of Truth.—What matters,—such trash cannot last long.

A Member of the College.—If our correspondent present his diploma to the faculty of Medicine, Heidelberg, it will be only necessary for him to remain fifteen days before he is admitted to examination, which will be conducted in English. The fee required, which appears to be the principal object, is 25*l*.; after which he is entitled to all the honours of M. D. of the above school.

METEOROLOGICAL JOURNAL.

MONTH. Sept., 1834.	Moon.	Thermom.			Barometer.		De Luc's Hygrometer.		Winds.		Atmospheric Variations.		
18		61	69	59	29·88	29·84	78	77	N.E.	N.N.E.	Cloudy	Fine	Fine
19		66	73	62	29·70	29·76	75	75	E.S.E.	S.S.E.	Fine	——	——
20		68	72	61	29·88	29·88	76	76	S.	N.N.E.	Cloudy	——	——
21		69	74	60	29·92	29·95	78	76	N.N.E.	N.E.	Fine	——	——
22		63	66	50	29.91	29·91	75	74	N.N.E.	N.E.	Cloudy	——	——
23		57	61	52	29·91	29·91	73	71	N.	N.	——	——	Cloudy
24		56	60	50	29·88	29·88	70	71	N.E.	N.N.W.	Foggy	——	Fine

50, *High Holborn*. William Harris and Co.

All Communications and Books for Review to be forwarded (free of expense) to the Publisher, 356, Strand, near King's College.

THE

London Medical and Surgical Journal.

No. 140. SATURDAY, OCTOBER 4, 1834. Vol. VI.

LECTURES ON THE THEORY AND PRACTICE OF MEDICINE,

BY WILLIAM STOKES, M.D.,

Delivered at the Medical School, Park Street, Dublin.—Session 1833–34.

LECTURE XXXV.

Scrofula—Former Opinions on—White and Red Capillaries—Division of the System into Red and White Tissues—Vascularity of the White Tissues—Dr. Graves's Views of the Lymphatics—Analogies of Lymphatics and Veins—Relations of the Circulating and Nervous Systems—Vitality of Serous Membranes—Reproductive Power of White Parts—Analogy with the Cold-blooded Animals—Increased Sensibility of White Tissues—True nature of the Scrofulous Diathesis—Reference to arrest of Development—Explanation of its Phenomena—General Principles.

Gentlemen,—In the varied catalogue of morbid affections to which man is liable, there is scarcely one of such paramount importance—such engrossing interest, as scrofula, whether we look to the obscurity of its origin, its insidious progress, the number and variety of the organs which it attacks, or its remarkable intractability, and extensive fatality. It is, indeed, a subject of deep concern to every one who is engaged in the pursuit of medical knowledge; and I do therefore entreat your undivided attention while I endeavour to give you some clear ideas as to the meaning of what has been termed the *scrofulous diathesis*, and scrofula itself.

It is now generally admitted, that a great proportion of our improved knowledge on the subject of scrofula, as well as many other diseases, has been the result of those splendid anatomical and pathological investigations which have distinguished modern times. The older authors knew little of pathological or comparative anatomy, and hence it was, that scrofula, on which pathology has shed such a broad and searching light, was to them an intangible essence, something which they knew to exist, but could neither pourtray nor define. If we look to what their opinions were on this subject,—opinions which, I regret to state, are not yet sufficiently exploded, we shall find that they are based on the then prevailing doctrines of exclusive humoralism; and that, instead of attempting to reduce the phenomena of scrofula to a fixed and tangible formula, they sought to explain it by referring to certain peccant and noxious humours in the system. But, in order to arrive at accurate notions on this subject, we must begin with the first formation of the human body; we must trace scrofula back to its primal source, and carefully explore its anatomical constitution.

If we examine the capillary circulation in its physiological state, we shall find two kinds of circulating fluids, one distinguished by its red colour, and called *blood*, the other transparent and whitish, or colourless, and termed *lymph*. In fact, we have two kinds of capillaries, one containing fibrin and colouring matter blended with an albuminous fluid, the other circulating only a colourless fluid containing little or no fibrin, and almost identical with serum. This is a fact which is now generally admitted. It has been supposed, that the red and white capillaries differ only in point of size, and this is rendered probable by the fact, that in cases of inflammation, vessels which previously contained only a colourless fluid become dilated, and are rendered capable of transmitting red blood. This goes very far in support of the doctrine, that the red and white capillaries differ only in respect to size. Let us take a few out of many examples of this kind. The circulation of the serous membranes in their healthy state is entirely white, but, in an inflammatory condition, we can, with the greatest facility, trace numerous red vessels ramifying through their substance, as you may observe in inflammations of the arachnoid, pleura, peritoneum, and other white tissues. You may see the same also in the case of a mucous membrane, as in that of the conjunctiva where it passes over the transparent cornea. This condition subsides with the disappearance of the inflammatory action.

These investigations, however, as to the cause of the difference between the red and white capillaries, are not of great moment in a pathological point of view; it will be sufficient for our purposes merely to admit this difference, and bear chiefly in mind the relative compositions of the fluids which circulate through them. One of these, as has been already stated, is called *blood*, and contains a quantity of fibrin and colouring matter; the other is termed *lymph*, and is chiefly composed of water and albumen; the former is characterised by the presence of fibrin, a highly animalised product as containing a large proportion of azote, the latter consists of materials of an inferior degree of animalisation, and in which we can scarcely detect the existence of azote. Recollecting this remarkable difference in the nature of the circulating fluids, we find, when we come to examine the solids of the body, that some organs are supplied with red blood, while others receive only white blood, and hence the grand physiological division of the body into *red and white tissues;* the red containing fibrin and colouring matter, and endowed with great vitality; the white containing chiefly albumen, and possessing vital power in a comparatively weak and imperfect degree. To give you an example of this, let us take the muscular fibre (which may be looked upon as the most highly vitalised of animal products), and we shall find that its tissue is red, it is supplied by red vessels, and exhibits an acute sensibility to external as well as internal stimuli. On the other hand, we observe that the white tissues, such as cartilage, tendon, and serous membrane, have a white and albuminous fluid circulating through them, that they are of an inferior organisation, and of a lower degree of vitality, and that, in a state of health, they are almost insensible to ordinary stimuli.

In order to prove the close connexion which exists between the white tissues and a white circulation, it is necessary that we should admit that these tissues are vascular; and on this point, it must be confessed, there is some difference of opinion among physiologists. Some say that the serous membranes and other white tissues are not supplied with vessels and nerves like other parts of the body, but that they are to be considered as a mere exudation. This is the opinion of Rudolphi. This notion, however, does not appear to be founded on truth; it has been disproved by the investigations of many eminent physiologists, but by none more than by Dr. Graves in his excellent lecture on the lymphatic system. Let us enquire, briefly, whether it be true that these tissues are supplied with vessels containing white blood. That such is the case appears from the fact of the *sudden development* of red vessels in those tissues when in a state of inflammation. Now, it cannot be supposed that an irritation, which has lasted only for a few minutes, could be capable of forming new vessels. That vessels already formed might become dilated in a very short space of time we can easily conceive; but that they should start into existence in the space of a few minutes is totally incomprehensible. The sudden appearance of these vessels does not by any means prove that they are new creations; it rather tends to show that they must have existed previously to the attack of inflammation which rendered them visible, and that they escaped observation before that occurrence, from their extreme minuteness and from the colourless nature of the fluid they contained. The next thing to be adduced in support of this view of the question is this:—that parts unconnected with any red tissue shall themselves become red under the influence of the inflammatory process. Thus, in a case of pleuritis, for instance, we observe that the lymph which has been effused becomes gradually organised, and ultimately converted into the serous membrane, forming those bands of adhesion with which you are all familiar. At certain periods of this process, vessels carrying red blood may be distinctly seen shooting through the lymph, which, you must bear in mind, is surrounded on all sides by the original serous membrane. These vessels are sometimes of great size; I have seen them, in a case of peritonitis, as thick as a crow-quill.

As the organisation advances to completion, we find that these vessels disappear, and a colourless serous membrane is formed. Now, here we have a newly organised tissue, presenting the same characters as serous membrane, and having no connexion whatever with any red tissue; and yet it is not less curious than true, that if this new tissue be attacked with inflammation, it will become distinctly red, and will have red vessels developed in the substance which may be examined and traced with the naked eye. The red vascularity of the synovial membrane, when inflamed, may be also quoted in proof of the same fact, for this, you will recollect, is a white tissue, super-imposed on other white tissues, the cartilage and capsular ligament. In addition to this, we have an argument drawn from the great similarity which exists between the serum of the blood and lymph. Dr. Graves believes that the lymphatics, which are supposed to act merely in carrying back the debris of the system, really enjoy a higher function; that they are to be regarded as the veins of the white tissues, or, in other words, that they are to the white arteries of the white tissues what the veins are to the red arteries of the red tissues. He brings forward many striking analogies between the veins and lymphatics. Both have valves, the effect of which is to direct the contained fluids towards the centre of the circulation; in both the fluid flows with an equable current toward the heart, and in both its course is directed towards the organ where it is destined to undergo the process of aëration.

Dr. Graves quotes Cruikshank and others to show that lymphatics, coming from a white organ, or tissue, become capable, in the inflamed state of that organ, of carrying red blood, and this is a strong argument in proof of his opinions. We find, too, that the white blood, like the red, is separable into a watery portion and a crassamentum. If any thing else were necessary to show the close connexion between the veins and lymphatics, it is furnished by the fact of their numerous anastomoses, a fact which has been placed beyond all dispute by Meckel, in his magnificent work on the lymphatics, which he has dedicated to his illustrious countryman, Soemmering. Lastly, it has been shown by Magendie, that the veins and lymphatics discharge a similar function, both being engaged in carrying on the process of absorption. Both then have a similarity of structure, in both the contained fluids flow in an equable current toward the heart, and are destined to be submitted to the same process of aëration, both contain a fluid separable into a clot and a watery portion; under the influence of the inflammatory process the one carries red blood as well as the other; they are intimately connected with each other by innumerable anastomoses, and both are alike engaged in discharging the functions of absorption.

It may be admitted, then, I think, that the white tissues are vascular, and that the lymphatics are the veins of the white tissues. Now, pursuing this investigation further, if we examine the different organs and parts of the human body, we find that most of them are composed of a combination of red and white tissues, but that some consist of white tissue alone. Thus, if we look to the constitution of muscular substance, we find that it is composed of muscular fibre which is a red, and cellular membrane which is a white, tissue. In the parenchymatous organs we find the same combination of red and white tissues present. But, on the other hand, we observe that serous and synovial membranes, ligaments, tendons, aponeuroses, and cartilages have no mixture of red tissue in them, and are composed of white tissue alone. The fact is, that both enter into the composition of most of our organs, but in some the white tissue prevails exclusively. The same conformation is observed in all the vertebrated animals, but particularly in the mammalia and birds. Now, admitting this, it appears that the proportion of red solids is in the ratio of the red fluids, and that of white solids in the ratio of the white fluids. This proposition we can establish by a number of indisputable facts. In the higher classes of the mammalia, the red solids and fluids are found in great abundance in the viscera as well as in the muscular parts. In birds the quantity of red blood is great, and consequently we find the muscular substance red and firm, the circulation active, and the temperature high. In the amphibious animals the flesh is paler, the quantity of red blood diminishes, and as the red tissues disappear the white increase in proportion. Descending in the scale we come to fishes; here we find that the quantity of red blood is very small, and that the white tissues predominate. When we arrive at the invertebrated animals, or those who have no spinal system, we observe a disappearance of the red fluids and red tissues. I shall here beg leave to read for you an extract from Dr. Graves's lecture. "The view already taken of the intimate connexion, in all the different classes of animals, between the development of the white parts and that of the lymphatic system is easily explained on the supposition of the lymphatics being the veins of the white parts. In invertebrated animals, which have no red blood, it would be more rational to call the vessels, conveying the white blood back to the heart, lymphatics than veins, for it is more consistent with analogy to suppose, that, in the lower animals, the retained portion of the circulating system corresponds with the former, as in the superior animals, the lymphatics are connected with parts, which, in their degree of vitality, most resemble the structures of the lower animals.

"In the higher classes of animals there are not only two circulating systems, one of red blood and the other of white blood, but also a twofold system of nerves, the cerebral and the ganglionic; the latter of which, in invertebrated animals, seems to perform all the nervous functions necessary to their state of existence, while these animals are remarkable for possessing only a simple vascular system.

"We find, therefore, a correspondence between the vascular system of red blood and the nervous system of the brain and spinal marrow. They are most perfect in animals most abounding in highly aërated red blood, and decrease according to the descending scale proportioned to the decrease of red blood, until at last we arrive at the invertebrated animals possessing no red blood, and no brain or spinal marrow."—*Op. Cit.*, p 24.

These facts seem to establish the law, that the proportions of red and white solids are in the ratio of their respective fluids. But let us consider this question in a different point of view. The human fœtus, in the earlier periods of its existence, presents the appearance of a white mass without any red tissue or red vessels, in fact it resembles one of the lower, or white blooded animals, but, as the process of development goes on, the red fluid begins to appear, and the red tissues increase; as it progresses towards perfection these changes become more manifest, until at length, having arrived at the summit of the zoological scale, the predominance of the red tissues is established, and even the new born infant exhibits the distinguishing characteristics of that being which holds the first rank in the order of vertebrated animals.

We have seen, gentlemen, that, in proportion as the animal rises in the scale of being, the proportion of the red to the white tissues is

increased, and that the lowest animals, who possess only a white circulation, enjoy a degree of vitality not far removed from that of the vegetable kingdom. Red blood, then, is the *pabulum vitæ*, the characteristic of superior organisation and vitality, the rich stream by which the nobler parts of our system are nourished. Applying this to the different states of our bodies in health and disease, we find that the predominance of red blood and red tissues is a proof of health and vigour, while that of white blood and white tissues shows the feeble and unhealthy individual. Before we pursue this further in its application to the investigation of disease, let us refer for a moment to some illustrations. In the Albinos the white tissues are more abundant and the quantity of red blood smaller, the muscular fibres are lax, and the constitution delicate. Again, compare woman with man. In the former the white tissues are more prevalent than in the latter, the skin is fairer, the vessels carrying red blood smaller, and the muscular system less developed. Women have more white blood and white tissues, and consequently their strength is less, and their constitution more delicate. Again, if we examine the hybernating animals, who pass long periods of time without taking food, we find that, at the termination of their hybernating season, their strength is remarkably reduced, and their tissues much paler than under different circumstances. The same diminution in the quantity of red blood and red tissues, and corresponding increase in the relative quantity of white tissues, occur in the case of persons advanced in life. From some cruel experiments, made in France, it appears that, by starving animals, their tissues became blanched in a remarkable degree, and they came to represent animals of an inferior grade, so far as the preponderance of white tissue was concerned. These considerations are highly interesting and important, and remind us of Lord Bacon's aphorism, that *white is the colour of defect.*

We may, then, conclude that the white tissues are less highly animalised than the red, and of a lower degree of vitality, and, arguing *à priori*, we would say that they are less able to resist death, and that in them disease would be slower and more obstinate than in the red tissues. Such, too, is the fact, for we find that the white tissues are most liable to morbid affections of an intractable character, frequently terminating in the total destruction of the diseased parts. Cancer, tubercle, ulceration in the cartilages, ligaments, or cellular substance, all these belong to the affections of white tissues. All these terrible inflictions are to be met with in those tissues which rank low in the scale of vitality; they occur in persons of weak habit, and diminished vital energy, and in whom the white tissues predominate over the red, and they are less under the influence of those curative means which are ordinarily employed in the treatment of diseases of the red tissues. Thus we find that many of the means, which are employed with such good effects in dispersing inflammations of red parts, seem to possess very little power in removing the diseases of white parts. In making these observations, I have spoken only in reference to chronic disease, but let us turn to the acute diseases. Here we arrive at a very curious fact. If we take, for instance, the serous membranes, we shall find, that, although strictly belonging to the class of white tissues, they are, nevertheless, very liable to acute and violent diseases. It appears strange that parts, possessing only an inferior degree of vitality, should be subject to such frequent and violent attacks of inflammation. Such, however, is the fact. It is very difficult to explain this apparent anomaly; I shall, however, throw out a few considerations which strike me on this point, having premised, that you are to look upon them, not as proved, but lying open to future investigation.

If we examine the pathology of serous membranes, we shall find that they are liable to inflammation in proportion to the quantity of red vessels in the organs they cover, or, in other words, the more they are connected with organs enjoying a high degree of vitality, the more they are subject to inflammation. If we take the serous membranes lining the three great cavities of the body, we shall find that this position is, to a certain degree, borne out by the facts. One of the most common cases of inflammation is that of pleurisy; we seldom open a body without meeting with evidences of its existence at some period or other of the life of the individual. Now, we know that the lung is the most vascular organ in the body, and that through it alone the whole of the circulating blood is transmitted. Next in order to the pleura, we have the peritoneum, peritonitis being a much more common affection than arachnitis, for the intestines receive a greater quantity of red blood than the brain. Among the viscera of the three great cavities, the brain is the whitest, and receives the least blood, and we accordingly find that its investing serous membrane is least liable to attacks of acute inflammation. We have also a number of curious facts with respect to the nature of the connexion which exists between any inflamed parenchymatous organ, and the serous membrane by which it is covered. Thus, in a case of hepatitis, we find that that portion of serous membrane, which invests the liver, exhibits traces of inflammation, while the rest of the peritoneum remains in its normal and healthy condition. You will see the layer of the peritoneum covering the liver in a state of inflammation, and will frequently find adhesions between it and the corresponding portion of the parietal layer, but no other sign of extension of inflammation. This fact is strongly in favour of the connexion between the inflammations of serous membranes and of the organs they cover. There is another form of partial peritonitis which is

exceedingly common, namely the inflammation of that portion of it which embraces the uterus, and which is so frequently met with in puerperal fever. Now here we have two considerations to bear in mind. During utero-gestation, there is a remarkable development of the uterus, and about the period of delivery, it is a vast red organ, having a powerful determination of blood to its substance, as well for its own support as that of the infant. We accordingly find, that after delivery peritonitis frequently sets in, its occurrence being favoured, in the first place, by the connexion between the peritoneum and a large vascular red organ, and, in the next place, because the determination has not yet ceased, and the blood which went to the uterus (but cannot do so any longer to the same extent) seems to be directed to the peritoneum. Another consideration bearing on this point is, that when lymph has been effused in the case of inflammation of serous membranes, the process of organisation and cure goes on the more rapidly, the nearer the inflamed membrane is to a red and vascular organ. If we take a case of pleuritis with effusion of lymph and serum, when is it that we find the process of organisation set up in the effused lymph? It is when the fluid has been removed by absorption and the two serous layers of the pleura are no longer prevented from coming in contact, for as long as that portion investing the lung is separated from the costal pleura, either no organisation at all takes place, or, if it does, it is of a slow and imperfect character. But as soon as the effused serum is removed, and the costal pleura come into close apposition with a red and highly vascular organ, the lymph immediately undergoes a process of rapid organisation. The high degree of vascularity of the lung, should be reckoned as one among the causes of the great frequency of pleural, as compared with peritoneal, adhesions.

A question may be asked here, connected with the idea that serous membranes possess only a low degree of vitality. If the vitality of serous membranes be of an inferior kind, why is it that their inflammations are so acutely painful? This, I must confess, is a question not easy to be answered. There is no doubt, however, that during the existence of inflammatory affections, the vitality of these parts is considerably increased. They are elevated in the scale *for the time*. Their vessels carry red blood, their sensibility becomes exquisite, and they enjoy a reproductive power, as is shown in the case of the formation of new synovial membranes, capsular ligaments, and serous membranes; thus, as Dr. Graves has beautifully remarked, showing an analogy of organisation and function, between *the white tissues of the higher*, and the whole constitution of the lower animals, in whom the power of reproducing *parts* is so remarkable. This circumstance seems to be strongly in favour of Broussais' doctrine, that inflammation is nothing more than a plus degree of local vitality. Some persons think that the pain in serous inflammation depends upon the density and unyielding nature of the affected membranes, for you are all aware, that one of the effects of inflammation is at first to distend the inflamed organ. This may be true. Again, it is said, that we are also to take into account the extensive and constant motions of the serous membranes. As long as respiration goes on in the chest, or digestion in the belly, while the ribs are elevated and depressed, and while the diaphragm descends, or while the peristaltic action of the intestines goes on, there will be motion in the serous membranes which invest their respective viscera. We know, also, that the brain enjoys a certain degree of motion. We must, then, in accounting for the pain of serous inflammation, take into consideration the dense structure and little distensibility of the parts, as well as their constant and uniform motion. There is one fact, however, which, as far as it goes, is of importance, and should not be forgotten when we consider the motions of serous surfaces in reference to pain. Of all the serous membranes the pericardium is that whose motions are most constant and violent. Yet I have now seen many cases of its inflammation, where quantities of lymph were effused, as detected by the stethoscope and by dissection, yet in which no pain whatever existed.

It appears to me that we can add something to these views in the way of explanation. When lecturing on hepatitis, I drew your attention to the fact, that if we compare the inflammations of the different solid viscera with respect to pain, we find that there is always less pain when the inflammation affects the central parts of an organ, than when it is superficial. In deep-seated pneumonia there is scarcely any pain, in pleuro-pneumonia the pain is often acute. In arachnitis the pain is violent, in deep-seated disease of the brain there is frequently no pain at all. Inflammation of the central parts of the liver is generally a painless affection; but, when it approaches the surface, it is always accompanied by more or less suffering. Now, if we consider the serous membrane of the abdomen, for instance, to be an organ of low vitality and inferior sensibility, we must seek for some other explanation of the pain which attends superficial inflammations of viscera. The following idea may be of some assistance towards an explanation. Let us take, for example, a case of inflammation occurring in one of the glandular viscera. You are aware that Müller has reduced the structure of all glands to one formula, that is to say,—a gland, in its simple state, consists of a cavity, shut at one end and open at the other, and the difference between the various glands does not depend on any departure from this rule, but on a difference in the mode of aggregation and arrangement of these little stuctures. You will have a notion of the structure of glands by

comparing them to a bunch of grapes, the grapes representing the glandular part, and the stalks their excretory ducts. Now you are aware that in most glandular organs the secreting portion is placed towards the circumference, and the ducts accumulate towards the centre; and, as the glandular portion always possesses a higher degree of vitality than the ducts, we can understand why the superficial parts of a glandular organ may be endowed with a higher sensibility than the deep-seated or central, and, consequently, that inflammation, affecting the superficial parts of glandular viscera, will be attended with more pain than when seated towards the centre, and affecting the excretory portion of the organ.

We are now, gentlemen, prepared to enter on the consideration of scrofula, on which much error still prevails, notwithstanding all that has been said and written on the subject. One great cause of the confused notions respecting scrofula arises from the circumstance, that some persons have understood the term as expressing mere local disease, as, for instance, of the glands of the neck, and having no reference to any peculiar constitutional diathesis; while others use it with reference to a peculiar condition of the system, which is called the scrofulous diathesis; and a third class apply the term *scrofulous* to a number of very opposite diseases, which have no character in common but chronicity and incurability.

By considering the subject physiologically, we escape those errors and acquire more accurate ideas as to its real nature; and, as far as I can see, we cannot help adopting the opinion of Broussais,—that scrofula implies nothing specific; but, simply, that there is an undue preponderance of the white over the red tissues, and that, in such persons, there is of course a greater liability to *diseases of the lymphatic system*. Where there is an undue preponderance of the white over the red tissues, there we have the scrofulous constitution, and the liability to its accompanying diseases. Observe, there is nothing specific in this; an individual, originally free from scrofula, may afterwards be subject to it, and it may, under certain circumstances, occur in all constitutions.

The characteristics of what has been termed the strumous habit, are known since the time of Galen. The skin is white, the complexion delicate and transparent, the hair fair in general, but sometimes dark; the features delicate, the upper lip thick, the alæ of the nose large, the head fully developed, the chest rather narrow, the joints large, a great tendency to sanguineous congestions, internal and external, which are very little under the influence of antiphlogistic means; the intellectual faculties early developed and of a higher order, great refinement, and delicacy of taste. In such persons there is generally a considerable preponderance of the white tissues, and they are much disposed to scrofulous disease, which is nothing more than a chronic irritation of the white parts and of the organs immediately connected with them.

We may look on the scrofulous diathesis as a condition of the human body which is to a certain degree imperfect, and which is to be attributed to arrest of development. There is a period of fœtal life, in which the whole mass of the body consists of white tissues. According as the individual progresses towards maturity, the red tissues become more abundant; and when he arrives at maturity of maturation the proportion between the tissues becomes completely altered, the red being now more abundant than the white. But if this process should happen to be arrested, either shortly after birth or during life, we have then an individual of a lower degree of vitality, and approximating to the class of white-blooded animals. That we may reduce the scrofulous diathesis to arrest of development seems to be borne out by other considerations. We find in persons of a strumous diathesis proofs of arrest of development in various parts, so that whether we consider the question as to the development of the whole or of particular parts of the body, the same conclusion obtains. Scrofulous children have large heads, and it has been long known that they are exceedingly subject to hydrocephalus. The great size of the head in this instance is reducible to the principle of arrest of development; and here we have some explanation of the fact of the activity of the intellectual powers in scrofulous persons. Again, scrofulous children have large bellies; and here we have another proof of the arrest of development. In the fœtus the belly is larger in proportion than it is in the adult; and if the individual grows up with this predominance, it is a proof of arrest of development. The liver in the fœtus is, as you all know, very large. Now it is a fact that many persons of a scrofulous habit grow up with this fœtal condition of the liver; and, accordingly, we find this organ enlarged, not as the result of disease, but because an equal and proportionate increase of other parts has not gone on; and here we have another fact confirming the principle of arrest of development. Scrofulous children are observed to have small limbs and contracted chests. Here, too, we again meet with the fœtal condition. In the fœtus the chest is small and contracted, and the extremities are puny and ill-developed. How beautifully this tallies with the state of the lung at that period of life, when there is very little employment for the thorax, and when the active functions of the lung have not as yet been called into operation. This too, informs us, why it is that such children are so liable to affections of the lungs. We find that scrofulous persons are of a feeble frame, and have weak and flabby muscles; and, in accordance with this, we find on examination that the muscular system to a certain

degree represents the condition of fœtal life, that the blood is albuminous, and its proportion of fibrin small. We observe that scrofulous children are subject to rickets, and that the proportion of phosphate of lime in their bones is small. Now this is precisely the condition of the bones in the fœtus. Thus, whether we look to the whole or to particular parts of the body, we find that scrofula is reducible to arrest of development, and that there is not in it any virus, anything particular or specific, as has been erroneously imagined. To these considerations it might be added, that nothing is more common than to see those monstrosities, distinctly referable to *local* arrest of development, occurring in the scrofulous subject; and the statistics of monstrosity show that in this respect the female sex predominates over the male.

There has been much disputation as to the question whether scrofula be hereditary or not. You can easily solve this question, by reflecting on what you have already heard. No doubt it is often so; one or both parents may be scrofulous, and it is natural that a child born of such parents should inherit their scrofulous constitution, as that it should resemble them in features. But, on the other hand, we sometimes find that scrofulous parents beget healthy children. This appears to be an anomaly, but it may be explained by the circumstances of the child having a good healthy nurse, living in pure air, and having comfortable warm clothing, all circumstances calulated to develope the red tissues, and of course strengthen the system. Thus a scrofulous taint may be completely worn out in a few generations. It sometimes, on the other hand, happens that healthy parents may have children of a strumous habit. This, however, is the rarest case, but can be explained by reference to causes which would disturb the balance of development, and a person of an originally sound constitution may, under certain circumstances, become scrofulous. Children may be badly fed and have insufficient clothing, they may be kept confined, and deprived of free air, light, and exercise; they may have an early irritation of the digestive system, from bad and unwholesome food, and in this way may acquire the scrofulous character without any hereditary disposition. Thus we come to the fact, which has been so frequently noticed, that scrofula will often pass over a generation, and that the grandfather and grandson may labour under it, while the son escapes its infliction.

It may be objected to this view of the question, that we frequently observe persons of dark hair and robust constitutions falling victims to scrofula. This is certainly true, but it is not on that account an argument calculated to militate against the doctrines which have been propounded on the subject. There are many causes capable of producing this increase in the white tissues, this peculiar state of the constitution, which we call the scrofulous diathesis. Excessive mental or bodily exertion, all the depressing passions, injuries of innervation of various kinds, deprivation of light, air, and exercise, early and continued gastro-intestinal irritation, persistent and exhausting diseases,—all these have a tendency to impair the functions of nutrition, and to destroy the balance between the different tissues of the body. If we look to those animals in which tubercles are found, we see that they are often those which have been brought from a hot to a cold climate, and kept in a state of confinement for a long time, and hence it is that we so often find fatal tubercular disease in animals which are kept for the purposes of exhibition. The same liability to tubercle is observed in several of our domestic animals kept in unhealthy situations, and deprived of air, light, and exercise. The truth is, that a combination of such causes will generate scrofula in constitutions which were originally sound and good; but it will occur at an earlier period, and with much more certainty when these causes are brought to act on persons in whom there is an original or congenital predominance of the white tissues. This fact is so well known as to require no further illustration; it is now generally admitted, and you will have many opportunities of verifying it in practice.

Allow me, in concluding this subject, to direct your attention to the following considerations. If we were to connect the phenomena of scrofula with a predominance of the white tissues, it would follow that woman would be more liable to the disease than man. Louis, in stating the relative liability of the sexes to consumption, makes the proportion of males to females as 70 to 92. Cancer, which is also a disease of the white tissues, is, you all know, much more frequent in women than men.

Scrofula, then, to use the term as expressing local disease, seems to have in it nothing of a specific character, or reducible to the supposition of a virus existing in the system; it seems to be a slow irritation of the lymphatic system, occurring in persons who have a predominance of white fluids and white tissues. It would appear, also, that this predominance of white tissues may be either congenital, or it may be acquired, and that, in this case, it is superinduced by various causes, all having a direct tendency to diminish the proportion of red tissues, and lower the vitality of the system. This, which appears to me to be the true meaning of what has been termed the scrofulous diathesis, you will find to be borne out by a multitude of facts, and you will have numerous opportunities in practice of proving the value and importance of this view of the question. In this way we get rid of that mode of treatment which was based on the supposed specific nature of scrofula, and of which the object was the removal of an imaginary virus, and we are guided to the knowledge of a more philosophical and more

successful line of practice. We arrive thus at the few and simple, but grand and efficient, principles in the treatment of scrofula; we see that scrofula is in its nature closely connected with the predominance of white and the diminution of red tissues, and we accordingly find that our curative means must embrace every thing calculated to invigorate the system, and add to the existing sum of vitality.

LECTURES

ON

MIDWIFERY & THE DISEASES OF WOMEN AND CHILDREN,

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INTRODUCTORY LECTURE.

GENTLEMEN,—The usual mode of commencing a course of lectures, whether on midwifery or any other subject, is by giving what is called *an introductory lecture.* It has been looked upon by some as useless, and, in fact, as an hour little more or less than thrown away; in my opinion, however, it appears to be a very desirable lecture; we are thus enabled to discuss a variety of useful but unconnected subjects, which it would be neither easy nor altogether convenient to introduce during the course. We have now the opportunity of stating the plan of arrangement which we intend to follow, of giving definitions as to the precise nature of the points to be discussed, and lastly, if it be a subject, which has engaged the attention of mankind from an early period, as is the case with midwifery, of entering into a short detail of its history.

With respect to the arrangement I intend to pursue, I must premise to you, gentlemen, that it will materially differ from that which is usually followed by authors and lecturers on midwifery; for, instead of dividing my course into an anatomical, physiological, and practical part, I shall omit the first division entirely, confining myself merely to the physiological and practical portions. I feel myself justified in so doing, because the anatomy of the female pelvis and parts connected therewith is a subject which strictly belongs to my colleagues, the lecturers on anatomy; and moreover, as midwifery is avowedly appointed to be attended in the second year of your medical studies, I am bound to suppose that you have made such progress in your anatomical knowledge, as not to require me to enter into the anatomical details. I must, moreover, confess that it suits my convenience; for having made, during the last few months, very considerable additions to my course, I find it necessary to devote those lectures, which had hitherto been anatomical, to other subjects of much greater practical importance.

Midwifery, gentlemen, I define to be the art of performing with skill certain mechanical operations, grounded upon physiological and pathological knowledge, not only for assisting women in labour, but particularly for the purpose of preserving uninjured the body, health, and life of pregnant, parturient, and puerperal females, as also the fœtus in utero, and the new-born child *.

From the earliest ages this art has been considered as one of the greatest importance to mankind, and hence we find that, in the ancient as well as the modern languages, it has been expressed by a variety of terms.

The science of midwifery, so necessary for the scientific practice of it, I define to be the scientific and theoretical knowledge of the rules for treating pregnant, parturient, and puerperal females, as also the fœtus in utero, and newly-born child.

The *science* of midwifery, can, I own, exist by itself, but, without the *art* of midwifery, it would be but of little service to mankind. The science of surgery can exist by itself, but of what use would a man's knowledge of surgery be to him, if he did not possess the requisite art or skill to put it into practice?

On the other hand, as is the case with all other arts, the art of midwifery presupposes a sufficient knowledge of its science. Without science, gentlemen, art dwindles down into a mere mechanical handicraft, and in the present case it becomes an occupation worse than useless, and, at all events, unworthy the character of a well-educated medical man.

You may, perhaps, think me inclined to overrate my own department of the profession, when I say that midwifery is the most important branch of the healing art, because upon the proper or improper practice of it depend the lives of two or even more individuals at the same moment; while, on the other hand, the other departments of the healing art are merely directed towards preserving the life of but one individual at a time.

Midwifery, moreover, has this great disadvantage, namely, that, when practised with awkwardness or ignorance, the mischievous effects which thereby result to mother and child are of so much the more importance, that death is either the immediate consequence, or an incurable injury is produced, which lasts for life. On the other hand, it is satisfactory to know, that in no branch of the healing art are the beneficial effects of timely, judicious, and skilful assistance so strikingly, so beautifully, and instantaneously perceived as in midwifery. Let me for a moment digress, to put this important fact in a more impressive point of view. Suppose, then, that you are attending a patient in her confinement; the child is born, the placenta expelled, the uterus contracted, the whole labour has followed a favourable and natural course; from some cause or other the uterus relaxes, it becomes soft and

* Osiander.

swells, the pressure which, during its state of contraction, had closed the orifice of those vessels which open into the uterine cavity, is now removed, and they pour forth a discharge of blood so profuse, that it has not merely been called a hæmorrhage, but has been designated by the characteristic term of *flooding*. In one minute, if this be allowed to continue, your patient will be beyond the power of recovery, and yet before that minute has elapsed, if you know your profession, and retain your presence of mind, she may be placed in a state of as perfect safety, as she was before in extreme danger.

I define *labour* to be the expulsion of the fruit of the womb, by the natural powers destined for that purpose *. The contractions of the uterus and abdominal muscles, and the expulsive power of the vagina, constitute the active phenomena; whereas the child and the passages through which it has to pass, constitute the passive phenomena, during the process of labour.

Few subjects, gentlemen, have been more subdivided, and I may also say, *misdivided*, than that of labour. Wherever it becomes necessary for me to use arbitrary divisions, let me assure you it shall be my object to make them as simple, concise, and comprehensive as possible. In the present instance, I propose to divide labour under two heads, namely, *Eutocea* and *Dystocea*; the one derived from ευ and τεχω, *bene pario*, signifying healthy, natural, favourable labour; the other from δυς and τεχω, *male pario*, signifying faulty, unfavourable labour—labour incompatible with health. I would fain not use Greek words on these occasions, but really I know of no single word in the English language which corresponds exactly. Δυς, when prefixed to a word, has generally been considered to mean difficulty; thus, in dysmenorrhœa, dyspepsia, &c., but it does not mean difficult menstruation or difficult digestion only, but a faulty and deranged state of these functions. Δυς rather signifies *aliquod in malam partem aut rem*, something faulty and unfavourable, anormal, incompatible with health. Eutocea and dystocea, however, are terms very generally employed upon the Continent, and are daily coming into more frequent use in this country.

The manner in which the expulsion of the fruit of the womb takes place, is called the *mechanism of parturition*. This process must neither be too slow nor too rapid; the active phenomena, or, in other words, the expelling powers, must only so far overpower the obstacle produced by the passage of the child through the pelvis and external parts, as to be able to complete the labour with safety to the mother and her child. No function exhibits such striking varieties *within* the limits of health as that of parturition. The difference in the weight, and size, and form of the child, the quantity and quality of the liquor amnii, the thickness and strength of the membranes, the size, shape, and situation of the placenta, the dilatability of the os uteri, the strength, duration, and regularity of the pains, the size and form of the uterus, &c., &c., present endless varieties to our daily observation, and yet, with all this, we find that labour will generally follow a healthy favourable course, and the child be born alive and well, without injury to its mother.

It is possible for all animals, and every race of the human species, according to their nature and habits, to come under such circumstances during parturition, as to require external aid; it is a mistaken notion to suppose that wild animals and savage nations always bring forth their young easily, and without danger. The wild animals take such precautions at this period as effectually to prevent all observation, therefore how are we able to assert that this process is always conducted so easily? more especially as we know it to be a fact, that those domestic animals which live with us, to a certain degree in a state of wildness, as sheep, horses, cattle, and which are accustomed to range freely about our pastures, do not always pass through this process favourably, but occasionally require the aid of the shepherd or farmer; in like manner, is this the case among savage nations. Savage nations, for instance, the American tribes on the banks of the Ohio, &c., remove their women from all human assistance when about to bring forth, it is, therefore, impossible to ascertain whether they always bear their children with ease, but there is every reason to suppose that difficult and even dangerous labours do occur among them.

The wild animals, therefore, and the savage tribes of mankind, as far as respects parturition, have no advantages over the domesticated animal, or over man in his civilised state; on the contrary, they are doomed to endure the greatest sufferings, and be exposed to the most imminent danger, far away removed from any assistance. Nature, therefore, has endowed them with a much less degree of sensibility, but with much greater bodily strength. Every healthy and natural labour requires not only a certain duration of time, but also a certain degree of suffering for its completion, nor is it even desirable that its course should be too rapid.

It has been a very general idea that the length of time during which an European female has to suffer in labour, is the result of those changes which take place in the human body from the effects of civilised life. That being restrained by dress, and enervated by the indolent habits of luxury, and from want of constant free exercise in the open air, the parts lose that degree of suppleness and elasticity which they would otherwise possess. It has been generally supposed, as I have before

* Naegelé.

said, that the females of savage nations bear their children with the greatest facility and with little suffering; we constantly hear of negresses and Indian women going down to the banks of a river, where they bring forth, and, having washed their child and bathed themselves, they return with it in their arms. A friend of mine told me, that in going up the St. Lawrence in a canoe, the squaw of one of the Indians, who was far advanced in pregnancy, begged to be put on shore, this was done, she disappeared among the woods, and, in the course of about 15 or 20 minutes, returned with her new-born child.

It was supposed that the pelves of these nations must be wider and more roomy than usual, but the investigations of Professor Vrolik of Amsterdam, who during the last few years has published a work on the pelves of different nations, tend to contradict these opinions. In examining the pelves of negresses and females of the Bushman tribe in Southern Africa, a race of people remarkable for their diminutive stature and delicately formed limbs, he found them to be so thick as to be nowhere transparent, and to be much smaller in every direction, than those of European females. From this fact, one would be inclined to suppose, that instead of suffering so much less, and bearing with so much greater facility than European females, they would, on the contrary, undergo much more severe and difficult labours. The reason why this is not the case, results from the head being so much smaller than those of European children. The fact, also, that they bring forth with such facility is not correct, for, on inquiry I find that they bear their children, not only with pain, but sometimes with difficulty. It has been observed in Java, that native women, pregnant by an European, suffer very severe and difficult labours, which may be easily explained from the results of Professor Vrolik's investigations; the head of the European child is considerably larger than the heads of the native children of these tribes, and cannot, therefore, pass through the small pelvis of the mother, without unusual suffering and difficulty*. Although the women of the various American tribes, who are accustomed to the endurance of so much bodily suffering and hardship, are delivered without any assistance, and generally with great facility, still we must not suppose that they bear their children without that degree of pain attendant upon every labour. The American women bear their pains in silence, and make a merit of supporting the greatest sufferings with the most perfect indifference; on the other hand, it is considered highly disgraceful to betray the smallest sign of pain, or even to let a sigh escape them. The case to which I have already alluded, where a North American female was landed, and in the course of 15 or 20 minutes returned with her child, is no proof of her labour having been of this short duration, in all probability she had been suffering for some hours previously, but, with that hardihood which forms so peculiar a characteristic of these tribes, she had borne her pains with seeming indifference, until, warned by her feelings of the near approach to the termination of her labour, she retired into concealment to await the delivery of her infant. In some travels to Cayenne and Guiana, it is described where an old woman tries to dissuade her daughter from marrying, by telling her that, if she knew what the pains of child-birth were, she would never think of marriage.

The native East Indian women are likewise delivered without any assistance; but with them it is not accounted so disgraceful to cry out; and it would seem that this must be a thing of no unusual occurrence, for it is a common saying among the Malays, that although children are gotten in silence, they are born in noise. It is moreover asserted, that Indian women of high rank, who do not labour or take much bodily exercise, are liable to spasms, convulsions, and such like affections, which sometimes render their labours dangerous.

Among some manuscripts belonging to my late father, which from their appearance must have been written forty or fifty years ago, I lately found the following observations, which seem to have been intended by him as introductory to a course of lectures or a work on midwifery, and which are so applicable to the present subject that I cannot do better than quote them.

"The science of midwifery has advanced more slowly to perfection than any other branch of medical knowledge; the reason for this is as obvious as the fact is unquestionable, for it would certainly make but little progress as a science, while as an art it was alone practised by those who were totally unacquainted with the principles of natural philosophy, and the general laws of the animal system; and whilst those, who, from being best acquainted with the sciences most immediately connected with it, were the most likely to have considered it scientifically, from not practising it as an art were not in possession of those facts which were indispensably requisite to the true knowledge of it.

"Great improvements have, however, been made in this branch of medicine within a few years, and these having been effected since midwifery has been taught and practised by well educated men, is the fullest proof of the truth of the foregoing remark.

"But though it may perhaps be still considered by some as much behind the other branches of the healing art, it cannot be doubted that it is as capable of improvement as any other part of medicine; indeed, in some respects it has an evident advantage over all of them, and for this reason the

* Naegelé, M.S. Lectures.

knowledge already acquired in midwifery perhaps rests upon a firmer foundation than most other medical doctrines.

"One principal cause of the uncertainty in the treatment of many diseases, has been the changes which the various medical theories have from time to time undergone; and whilst the imagination has any share in forming these theories, and which probably ever will be the case, this uncertainty will remain. But this is not the case in midwifery, as the very nature of it precludes all conjectural hypothesis, the knowledge of it as a science, and skill in it as an art, being alone attainable by the experience of actual facts. A course of lectures on midwifery must be considered as a detail of the facts and circumstances attending nature's great work of parturition, and must comprehend not only a knowledge of those means which nature generally makes use of to accomplish this important end (and which might perhaps be sufficient in giving merely the natural history of the animal operation), but it should enumerate those various obstacles to delivery which so frequently occur, and all those still greater difficulties which, though of more rare occurrence, sometimes take place; it should point out the properest methods of obviating these difficulties; it should inform how far nature is herself able to overcome them, and where art alone can do it; it should show what nature can do, and what she can with impunity suffer from the interference of art. But all this knowledge, indispensably necessary as it is to practise midwifery on secure and rational principles, can have been derived from no other source than the experience of actual deliveries; without such experience, the most ingenious physiological hypothesis concerning parturition, and even the most accurate anatomical knowledge of the formation and structure, the situation and connexion, of the parts most immediately concerned in this wonderful process, would avail but little, for alone they would be scarcely sufficient to suggest even a very imperfect idea of the most simple and natural labour, much less would they point out those dangerous deviations from nature's usual mode of delivery, which it is the peculiar business of midwifery as an art to attend to and counteract. There can be, therefore, no doubt but the progress which midwifery has hitherto made, must have been in exact proportion to the number of facts which have been made known and established, and that all future improvements in it must arise from the same source, viz. the acquisition of new facts. The value of well authenticated cases must on this consideration be sufficiently obvious, and, indeed, provided they be faithfully and accurately related, perhaps they cannot be too much multiplied. The communication of new or rare facts will undoubtedly always in the greatest degree excite attention, and from such only the practice will derive the most material improvement. But the relation of such as are not unprecedented will have some use; they will tend to confirm opinions which have been founded upon similar cases, and serve to strengthen that testimony which, in a matter of such practical importance, cannot be too strong."

The earliest record which we possess of assistance having been given to a woman in labour, is in the 35th chapter of Genesis, where, during the flight of Jacob, his wife Rachel fell in labour; "and it came to pass, (says the scripture) when she was in hard labour, that the midwife said unto her, fear not, thou shalt have this son also:" "and it came to pass, as her soul was in departing (for she died), that she called his name Benoni, but his father called him Benjamin." This account is interesting, not only because it mentions the presence of a midwife, but also because it shows us that even in those warm countries, and with all the advantages of constantly living in the open air, and of the roving life which the patriarchs led, the females of those times were not exempt from severe and dangerous labours.

The second case of labour recorded in the Old Testament with any degree of minuteness, is still more interesting; it is where Tamar is brought to bed of twins. This seems to have been a most severe and protracted labour, the first child having presented with the hand and arm; by the continued action of the labour pains the other child seems to have been pushed down before the first, forcing it more towards the fundus uteri, and thus causing the hand and arm to be withdrawn into the womb; while, in passing over the perinæum, the second child seems to have produced a considerable laceration of it.

In Egypt, where civilisation first attained a considerable degree of advancement, the cultivation of the arts and sciences was chiefly in the hands of the priests, some of whom also practised the healing art. Among other objects of their attention, it is probable that the means of affording aid in difficult parturition was one, especially as the Old Testament informs us that the Egyptian women, who were brought up in luxury, did not bear their children so easily as the Hebrew females did, for the midwives complained that the Hebrew women were generally delivered before they could reach them. There is a curious passage in the first chapter of Exodus, which seems to indicate that there were more arrangements made in those times for conducting a labour than has generally been supposed. The King of Egypt is recorded to have said to two midwives, "when ye do the office of midwife to the Hebrew women, and see them upon the stools, if it be a son, then ye shall kill him, but if it be a daughter, then she shall live." Now the question is, does

this word *stool* mean anything analogous to the labour chair of modern times? The patient is said to have sat upon a chair or stool, with the midwife before her, to receive the child upon her lap when born; she then laid it upon the ground, together with the placenta, and having cut the umbilical cord, and rubbed the child with salt, she washed it, and then wrapped it in swaddling clothes. There is another labour also recorded in the Old Testament, viz., in the first book of Samuel, which is also interesting, inasmuch as it evidently describes a case of labour prematurely induced by severe mental affliction; the child was born alive, but the mother died shortly after, in all probability from flooding.

The earliest record which we possess of artificial assistance having been given to women in labour by men is among the Greeks, in the time of Hippocrates, who died 357 years B.C. The writings of this author, which have been handed down to us, show that, during the age in which he lived, medical men were occasionally consulted in cases of difficult labour, and that assistance was given either with the hand alone, or with peculiar instruments, according to certain established rules. The patient sat upon a chair with an inclined back, or upon a bed adapted for the purpose, and the midwife endeavoured with her hands to bring the child with the head foremost into the world; if she did not succeed in this, the advice of a physician or surgeon was requested, who either endeavoured to extract the child with his hand, or, having opened the head with a lancet, which was also used for rupturing the membranes, the child was extracted by the hand alone, or with the assistance of hooks, or, in other cases, having introduced a sharp instrument, attached to the middle finger, he dismembered the child, and extracted it piecemeal with a pair of toothed forceps; the expulsion of the placenta was generally left to nature, but if it did not follow after a certain time, attempts were made to accelerate it, either by the weight of the child, or by the action of certain internal remedies; it was considered expedient that some time should elapse before dividing the cord, and when this was done that portion nearest the child was tied with a woollen string.

The excision of the fœtus from the womb of its dead mother seems to have been known to the Greeks at a very early period, as is proved by the fable connected with the birth of Æsculapius. Coronis was the mother of Æsculapius by Apollo, who, having been informed that she had been guilty of infidelity towards him, in a fit of anger destroyed her with lightning; but, having saved the child from her womb, he had him brought up by the Centaur Chiron, who taught him the art of medicine.

It was a law also among the Athenians, that no pregnant woman, accused of a capital crime, should be put to death until after the birth of her child. Among the early Romans a law was made by Numa Pompilius, the successor of Romulus, that no pregnant woman should be buried until her body had been first opened, for the purpose of saving the life of the child, and the neglect of this was considered in the light of murder. In this manner are Scipio Africanus, and Manilius recorded to have been born after the death of their mothers, as at Athens no pregnant woman, condemned to death, was allowed to be executed at Rome before the birth of her child. From the works of Celsus we are much better acquainted with the state of obstetric knowledge during the latter periods of the Roman empire than during the earlier ages. In the 29th chapter of his 7th Book De Medicinâ he expressly treats of artificial delivery; his most important observations are those which relate to turning the child by the feet, and of which no mention is made in the works of Hippocrates. Celsus taught this mode of turning as well as that which was practised by the Greeks, viz. where the child was brought down with the head foremost, and considered the former operation by no means difficult. His observations as to how the woman is to be placed for artificial delivery, how we are to gradually dilate the os uteri, to turn the child, to extract it whole or dismembered, with the hand or by the aid of hooks, to extract the placenta, and to treat the patient during her getting up, are such as give a very excellent picture of the state of midwifery in his time. The Roman women, like the Hebrews of earlier times, had also their labour chairs, and practised various religious and superstitious ceremonies to insure a healthy pregnancy and favourable labour; during their pregnancy they usually addressed their supplications to Venus Genetrix, and suspended their girdles in the temple of Diana; their diet was very light, eating no animal food but snails, with cabbage and other green vegetables, and their drink was prepared from dittany. They took constant exercise in sedan chairs, or rode on horseback, but in this latter case it was considered necessary that the animal which bore them should be a mare. On the commencement of labour they addressed themselves to Engeria, Fluonia, Uterina, Mena, Lucina, and various other female deities; the patient retired to a room prepared for the purpose, spread with costly carpets, took off her cloak and sandals, and tied a bandage round her head; she then seated herself upon the chair, with the upper part of her body, as far as her loins, uncovered, and was very careful not to cross her legs, or clasp her hands together. When the labour was over she was carried into her bed and fresh ceremonies were commenced.

I shall now pass on, gentlemen, from the time of Celsus to a much later period, viz. to about the tenth century, which is remarkable in the annals of midwifery for having produced

two Arabian authors of very considerable name and merit, Avicenna and Albucasis, commonly so called. The former was born at Bucharest, a considerable town in Northern Turkey, and seems to have been gifted by nature with very great talents; at the early age of ten he is said to have possessed a thorough knowledge of the Koran, and to have completed his studies in philosophy and medicine by the time that he had attained the age of sixteen; he settled at Ispahan, the capital of Persia, where he wrote his medical works. Avicenna has the character of a very verbose compiler, with but little original merit, nor can we be surprised at it, if we are to believe what his friend and pupil, Abu Abdalla Algiuzani, said of him, viz. that he was able "quinquaginta folia uno, vel die perscribere," a degree of facility in composing which would have outstripped even our late great novelist. Avicenna at last attained such a degree of celebrity that he was honoured with the title of Scheikh Reyes, or Prince of Physicians. In the 3rd book of his works you will find a good deal relating to the midwifery of his day, whence it appears that medical practitioners were, at that time, more inclined to have recourse to internal and external remedies than to give manual or instrumental assistance.

The most interesting records, as to the state of midwifery among the Arabians which have reached our time, are those contained in the writings of Abulcasis, alias Buchasis, Alsaharavius, or Albucasis. This celebrated author is said to have been born at Alzahra, a town which once existed at about five-and-twenty miles' distance from Cordova, and to have died there A. D. 1122. In part of his work he has described the midwifery of his time, and, like Avicenna, has taught it according to the old principles of the Greeks and Romans; but what renders his works so interesting is, that the manuscripts have been illustrated with drawings of the various instruments employed in the obstetric operations at that time; among these we find a speculum uteri, a species of blunt fork to push back the presenting part, a circular forceps with teeth, &c. Albucasis has also recorded a very curious case of extra-uterine pregnancy, where the patient was also pregnant in the natural manner, and was delivered of the extra-uterine conception by the formation and bursting of an abscess at the navel.

Artificial delivery seems to have been limited almost entirely to the excision of the fœtus from the womb of its deceased mother. In this way we are told that Count Burcard, of Linzgau, afterwards Abbot of St. Gallen, was born in 959 "ex cæso matris utero," and hence was called "Ingenitus." Gebhard, Count of Bregenz and Bishop of Constance, was also brought into the world by this means *.

* Osiander.

I shall not take up up your time, gentlemen, with giving you a long and prosy history of the many great and eminent men who flourished between the twelfth and seventeenth centuries, because you will know them to much more advantage when we come to treat of the subjects upon which they have tended to throw so much light. Among these, I shall content myself with merely enumerating the names of Vesalius, Pierre Franco, Ambrose Paré, Severin Pineau, Guillemeau, Fabricius, Steno, De Graaf, &c.

Hitherto, midwifery had been practised almost solely by women, and, in some countries, men had been forbidden to do it under severe penalties; nor was it until 1663, that medical men began to practise it in common as well as in preternatural cases. At this time Madame de la Valière, the celebrated mistress of Louis XIV. of France, was in her first pregnancy, and near her confinement. The king was desirous it should be conducted privately, and, not seeming to have much confidence in any of the midwives of that time, appointed Julius Clement, a surgeon, to attend her. During the labour the king stood behind the curtains of his mistress to watch him, and was so pleased with his care and dexterity, that Clement rose into high favour, and was appointed to attend the dauphiness and princesses of the blood-royal, and many ladies of the highest rank in their confinements, and, in 1711, received the patent of nobility under the title of *Accoucheur*. This name pleased the medical men of Paris so much that they began to call themselves accoucheurs also, and thus it has gradually come into common use. The prejudice against women being attended in their labours by men, a duty which, among many savage nations, belongs solely to the men, gradually wore away, more especially when it was known that the celebrated Louis XIV. had been obliged to perform the office of accoucheur himself to his mistress La Valière, in her second confinement, and receive with his own hands a natural son, who was afterwards the Duke of Vermandois.

In an old work, published at Cologne, entitled *La Vie de la Duchesse de la Valière*, are the following particulars of her second labour, of which I give you a short translation:—

"Madame de la Valière was taken with such powerful labour-pains and such constant throes, that the king, who was with her, was in a state of the most painful embarrassment. The shortest way was to call for assistance, and send somebody to fetch a midwife. The evil was very pressing, and he had no time to lose. The king, therefore, put his head out of the window, and called out that somebody should come to him and send the midwife. Many came, but it was too late, and his majesty was compelled to perform the duties of a midwife himself. Not having expected such

a disagreeable sort of a job, he happened that day to be wearing a most splendid dress, embroidered all over with pearls and diamonds, and which was entirely spoiled. By this time the ladies of the court had arrived, and found his majesty with large drops of perspiration upon his face, from the exertion he had undergone in supporting La Valière during the worst of her pains."

So much, gentlemen, for the history of midwifery, and a general view of it as it has appeared in other countries and in other times. I have purposely touched upon it in this slight and cursory manner, because, until you have entered upon the subject itself, you cannot be expected sufficiently to understand, or to feel interested with, the more minute details of it. Before we part, let me for a few moments call your attention to certain points of principle and duty connected with the practice of midwifery, which I feel it is *my* duty to impress most earnestly upon your minds. Besides the vast responsibility under which you will always have to act, from having *more than one life* depending at the same moment upon your skill, your knowledge, and your presence of mind, let me entreat you never to forget the high reliance which the patient and her friends *must* place upon your unimpeachable honour and integrity. Put yourselves for an instant in the situation of a fond and devoted husband, who in this hour of anxiety yields up the object of his affections to your care and skill, to conduct safely through that severe ordeal of suffering and danger, which *must* be, more or less, the attendant of every labour.

What can that man's mind be made of, who can be in *any* degree deficient of that delicacy, kindness, and perfectly honourable conduct, which it must be ever the pleasure, as well as the duty, of a true-born gentleman and well-educated man to show towards his patient, whatever may be her rank or station in life. Under no circumstances do women, generally speaking, show so much gratitude and depth of feeling as to the accoucheur, who, during their labour, has behaved towards them with that degree of kindness and attention which every sympathising mind will naturally show for such suffering. Under no circumstances can a married woman, with propriety, show such a degree of regard for a stranger, or permit herself to treat him so confidentially, as the medical man who has attended her during her confinements. Consider, then, gentlemen, the peculiar circumstances and responsibilities under which you will have to act; bear well in mind the duties incumbent upon you; and let me entreat you never to forget that it is a woman who has entrusted herself and infant entirely to your skill and care, and who looks up to you for life and health.

CLINICAL LECTURES

DELIVERED BY

G. J. GUTHRIE, ESQ., F.R.S.,

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At the Westminster Hospital.

LECTURE XIX.

On the Treatment of the Bar at the Neck of the Bladder.

Gentlemen,—The local treatment of the bar or stricture of the neck of the bladder is of the greatest importance; and, as the disease has been only of late distinguished, it is not thoroughly understood. Experience has not yet enabled us to support our practice by numerous instances of successful management, although the cases which have fallen under my observations lead, I trust, to just and legitimate conclusions.

When the disease occurs in persons under or about the middle period of life, the steady use of the solid silver sound, gradually increasing the size to the largest the urethra will admit, will gradually effect a cure, although, to prevent a relapse, it should be passed occasionally. I have seen within these few days one of the first cases to which my attention was drawn, now several years ago. The gentleman is himself a medical man, and was treated by me in this manner, after believing his life to have been in danger from complete retention of urine for several hours. He assures me he is now free from inconvenience, but passes his solid bougie from time to time lest he should suffer a relapse.

I have had, within the last twelvemonth, another medical gentleman of seventy years of age under my care, in whom this complaint was commencing, and which he believed to depend on disease of the prostate gland, the symptoms being in many respects similar. I could not, however, on examination, detect any enlargement of the prostate, although some might exist, whilst the contraction of the orifice of the bladder was clearly to be felt. The frequency of making water was great, particularly at night, and the general irritation considerable, a small quantity of urine remaining unevacuated, however great the effort made for its discharge. This gentleman has been restored to health and comfort, and his symptoms all relieved, by the use of the large silver catheter, and by washing out the bladder with water as hot as he could comfortably bear it every other day. It had a marked and rapid effect upon him; and I am so satisfied of the efficacy of the remedy, and of the advantage to be derived from its use, that I strongly recommend it in all cases in which there is any affection of the bladder, sometimes combined with the various preparations of opium, and particularly those of morphia. I believe it is

important that the water should be of a higher temperature than that of the urine when discharged. It should, however, be first used at 98°, and the temperature may be gradually increased until it has reached the highest point that feels comfortable and advantageous to the patient, at which it should be retained. I always inject as much as feels agreeable to him, on similar principles; at first the quantity may be small, but, after a time, it should be gradually increased; and, whilst the bladder loses its irritability, it acquires the capability of being dilated in many instances, in which, from long-continued irritation, it had become thickened and contracted. The lotura vesicæ is, in fine, a means of cure which should never be neglected in disease of the bladder, and which should only be abandoned when it is found on trial to be of no advantage.

The silver catheter or the solid sound is not, however, always competent to effect a cure, or even to give relief, when passed from time to time. The incapability of emptying the bladder, of evacuating even an ounce of urine, remains unrelieved, although the silver catheter is introduced twice, and even oftener, in the twenty-four hours. The attempt to dilate the neck of the bladder by a larger or by a dilating instrument only brings on pain and increases the evil, so that it is obliged to be given up for a smaller instrument than the one originally used, until the irritation thus caused shall have subsided. In these cases recourse must be had to the permanent catheter, or one which is retained constantly in the bladder, and which, by its slow and gradual operation, leads to the absorption of the bar or stricture in the same manner as it leads to the beating down of an enlarged portion of the prostate gland. I have reason to believe that I have succeeded in this way in many instances in affording relief, that could not be obtained by either of the other means indicated; but these cases may also have been accompanied by disease of the prostate, a point which dissection alone can verify.

This method does not always, however, succeed, and surgery must come to the relief of the patient by an operation. The bar, or dam, at the neck of the bladder must be divided, and the question is, how is it to be done with the greatest safety?

The observations I have already made on the subject of dividing the prostate gland, and with it the bar at the neck of the bladder, when such disease existed, bear upon the present question of doing it when this latter complaint exists alone. It will naturally be asked, why an operation, which Sir William Blizard states to have succeeded so well, should have been abandoned, and its advantages be even almost unknown to modern surgeons? To this question Sir William Blizard cannot give so satisfactory an answer as could be desired; and says that many successful operations have fallen into disuse in a similar manner. From the most careful consideration I have been able to give the subject, I am led to believe, that the operation on the prostate gland was done previously to the introduction, by Sir E. Home, of the method of treating it by the catheter, used either frequently or permanently, and that the relief obtained in this way superseded the further consideration or extension of the practice by incision, inasmuch as the cases of middle-aged or otherwise healthy persons, on whom it would have been done, were relieved sufficiently by this means to make life comfortable; and, in persons of more advanced age, or in broken down constitutions, it was not considered advisable to have recourse to it. That there are periods, in many cases of this disease, in which the division of the prostate gland would be very advantageous, and might prolong the lives of many sufferers in comparative comfort I am quite satisfied; but I am no less satisfied, that the surgeon who should propose at present such an operation, unless in an extreme case, would soon be without patients to propose it to. The time will, however, arrive, when a more accurate discrimination of these diseases will be made, and operations can then be recommended with a confidence proportioned to our knowledge.

The bar, formed at the neck of the bladder, has, I believe, been mistaken for an enlarged prostate; it has not, at all events, been considered as a separate disease; and the use of the catheter has generally given such a degree of relief as to render the patient tolerably comfortable. When, however, in spite of the continued use of this instrument, the disease increases and renders life miserable; the question is then simply, whether the person shall be allowed to die without a further effort being made for his relief? I think not; and in such a case would suggest that an operation be performed. The object is to divide the bar, dam, or stricture with as little injury as possible to any of the neighbouring parts. When these are all sound, as far as can be ascertained, I recommend its being done by an instrument which Messrs. Everill and Mason, of St. James's-street, have made at my suggestion, being an improvement on the central perforator, or lancet, of Mr. Stafford, which renders it capable of cutting on the side, and of being easily cleaned. Messrs. Everill and Mason wished to call it my instrument, but, as I never claim more in any instrument than the suggestion, leaving the mechanism entirely to the artist, I have begged them to take to themselves any or all the merit which may be due to it or them. The first instrument I used of the kind was made for me by Mr. Ferguson several years ago, and he made many attempts before he succeeded. Messrs. Everill and Co. have perfected it.

When a No. 2 prostate catheter is used, and it resembles in shape the common urethra sound recommended by Mr. Stanley, it will often slip over the bar with tolerable ease; but if one with a different curve be tried, and

particularly if the curve be small, or the instrument is, in other words, straighter, the bar will catch on the point of it, and sometimes the obstacle can hardly be overcome. When the nature of the complaint has been well ascertained by repeated examination in every way, an instrument of the same shape, carrying at its extremity the small concealed knife alluded to, should be selected, and which, by a spring, is made to project as much by the side or by the end, or by both, as may be thought advisable. The knife being projected, just as the instrument is felt to be passing over the bar, will cut it; and if, after it has just passed into the bladder, it be withdrawn, the little knife, in coming back, will enlarge the original cut; or it may be made altogether by the withdrawing motion of the instrument; the knife being sprung after it has just entered the bladder. If the bar be thin or narrow, I have no doubt of the possibility of dividing it in this way without doing mischief; and in two cases in which I have tried it, I have reason to believe the object was effected from the greater facility with which the catheter afterwards passed into the bladder, and from the relief obtained in passing the urine. I do not, however, believe that when the bar is complicated with an enlargement of the middle or of the left lobe passing behind it, the division of it can be effected in this manner; and I am at present disposed to confine this mode of operating to the pure cases I have just alluded to, and in those only when relief can be obtained by no other means. If the bladder is full, or contains a fair quantity of urine for its size, no injury can easily accrue to any other part in the operation; and there are no large vessels to divide. The merits of the proceeding can only, however, be fairly and fully ascertained by the examination, after death, of some cases in which it has been tried without success, or without being able to save the life of the individual. The advantages and disadvantages will then be soon seen, and the necessary improvements will be made, so as to meet the exigencies of each particular case; for I cannot divest myself of the impression, that they are curable, even as late as when the mucous membrane of the bladder is about to pass into a state of chronic inflammation; and I am sure, that when it is in that state, any operation that can be proposed must be advantageous to the patient. In all these cases, even in the worst (and this is peculiar to them), the catheter meets with little difficulty in passing into the bladder; and this operation should not be attempted where it does, for the probability is, that in such case it is not the very neck of the bladder which is in fault, but that the patient has either a false passage or a disease of the prostate gland. I have at this moment under my care two gentlemen in this situation. One has a false passage, commencing about five inches down, and proceeding behind the prostate and bladder, both of which can be raised by depressing the handle of the instrument, the end of which might of course be readily forced through, if it were a little pointed. He also knows when it takes this course by a peculiarly disagreeable sensation, which he describes as appertaining to the rectum. The sensation is not less peculiar, although very different, when it takes the right course, which it always will do by a little management in bearing the point against the upper surface of the urethra, in a particular manner which practice has taught. The same instrument will go either way; a No. 2 enters the bladder, and draws the urine off at seven inches, whilst it will go ten in the false passage. In the other gentleman, the instrument passes eleven inches, and can be felt in the same situation when the handle is depressed, raising up the bladder. An error, giving rise to an operation, in either of these cases, would, I apprehend, be a very great misfortune, and might be followed by fatal consequences from the extravasation of the urine; for although it does not pass backwards into the false passage in any quantity, it might be very different in its effects, if it passed direct from the bladder into it, particularly when newly made.

We have at present in the hospital * a man who has a bar at the neck of the bladder, a certain degree of enlargement of the prostate, and a stone in the bladder. The passage of the No. 2 prostate catheter is obstructed in the prostatic part of the urethra, and cannot readily proceed; a large common catheter passes through this part easily, is arrested by the bar, but after a little hesitation rides over it into the bladder. The attempt to cure this man of his stone, by breaking it up by lithotrity, would be absurd. The only operation which ought to be done is the lateral one, and by which the three diseases might be cured at the same time.

In the very advanced stages of the disease, when the bar is fully formed, when pouches exist, and the mucous membrane is in a state of chronic inflammation, giving rise to an almost continued and irresistible desire to make water, whilst the agony in passing a few drops is extreme; I believe it will be found that an operation similar in its effects to, but milder in its nature than, that for the stone, is the one which ought to be had recourse to, if relief is to be obtained from operative surgery. In such cases, I suspect that the capability for action in the neck of the bladder must be suspended, as well as the dam formed at its orifice divided. The urine will flow involuntarily for several days; time will be given for the chronic irritation to subside; and when the cut parts have reunited, and the bladder begins to resume its functions, no bar will be found to derange its natural actions, and to re-excite that irritation which cannot fail to be ultimately fatal.

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* This man, George Ryan by name, is in the country at present.—Rep.

The lateral operation for lithotomy will, I think, answer, with this exception, that it will, on the whole, be milder. The division of the neck of the bladder and of the prostate must be as lateral and depending as the safety of the rectum will permit, and should never extend quite to the boundary, or external wall, or covering of the prostate gland. It need not be of a larger size than will admit the finger easily to examine the neck of the bladder, and to ascertain that the division of it and of the bar has been properly accomplished.

It is possible that the bar at the neck of the bladder may be more safely divided, and perhaps on easier terms, by opening the urethra in the central line of the perinæum, after the manner I have recommended for the division of a stricture. The operation will, however, be much more simple, inasmuch as the urethra can be opened on a grooved staff passed into the bladder, when a straight director may be introduced in its place, in which a probe-pointed, strong, but narrow knife can be passed. The director may then be withdrawn, when by raising the handle of the knife, and in this manner depressing the probe point in the bladder, it may be made to cut its way through the bar, and to the left side of the urethra, without dividing the prostate so as to injure the rectum. I have not had the opportunity of doing this operation, and cannot therefore recommend it as sanctioned by experience; I must be contented to suggest its practicability.

After any of these operations have been done, and one great source of irritation has been removed, the greatest possible attention must be paid to the state and qualities of the urine, so as to bring it to, and keep it as nearly as possible in, its natural state, or no permanent advantage will be obtained.

[We are happy to perceive that these valuable lectures have been published separately by the author, with various additions, and three coloured lithographs. We make no doubt of the work having an extensive sale.—Eds.]

Review.

Bridgewater Treatises: Animal and Vegetable Physiology, considered with reference to Natural Theology. By Peter Mark Roget, M.D., Secretary to the Royal Society, &c. 2nd edit. 8vo. pp. 661. Vol. II. Pickering. 1834.

Physiology has been defined "the science of life," "the philosophy of living bodies;" but it must be obvious that no abstract definition can comprise the manifold subjects which are included in this branch of philosophy. The materials which compose this globe are divided into two distinct classes, and denominated *organic* and *inorganic*; a division which, however arbitrary it may be deemed by the casuist, must yet be admitted. If we take a comprehensive survey of all nature's works, every thing around us, both on the surface of the earth, and in the starry firmament above us, we perceive one indomitable principle prevailing, and it is motion. Mutation is the character of the universe, but it is changeless and ever the same; and however a paradox it may appear, it is nevertheless true. Leaving the inorganic portion of the earth to the natural philosopher, let us proceed to investigate the nature of organised bodies, of matter which is said to live. The study of animated nature is the province of the physiologist; it is a study which discovers at every step the most ineffable beauties. From the evolution of the parasitic vegetable to the glorious development *of the human species*, all is wonder. To the philosophic mind it is a subject which displays the operation of infallible laws, and unfolds, as it were, in sublimity the palace of a wise and omnipotent Being. Further observations could not enhance the value, or excite the admiration, of physiological study; we shall therefore proceed to give a general analytic view of the above work. *This* alone would have been sufficient to transmit to posterity the name of the Earl of Bridgewater. It is a work abounding in information, and embodied in language almost amounting to poetical. The two kingdoms of living beings are separately discussed, under the titles of "animal" and "vegetable physiology." The first volume commences with some observations on "final causes," a topic difficult to treat, and which comes more particularly within the province of the theologian than the physiologist. It is one upon which much may be said; it might be expatiated upon from time to eternity, without discovering more than that rational men are conscious of their own being, believe in the existence of a Creator, a Great First Cause, and that the beings which he has created were each destined for its respective locality and use, and are ever under his immediate guidance. That the power, and wisdom, and goodness of God are displayed in every production on this globe, is a truth so indelibly impressed on the mind of civilised men, that none but a mad-

man would dare to question or impugn its verity. Dr. Roget has left the position where he found it; it is an undemonstrable one, and all such metaphysical disquisition but involves the mind in perplexities. We have next a dissertation on "the functions of life;" a phrase of which the speculatist may fairly question the appropriateness. We are of course irresistibly compelled to the admission that "life" is an engine, a machine which plays its part in the living mechanism; a being evolving itself in various organs, at various periods, and under different forms; cameleon-like assuming different phases and different colours. Now it moves an elephant, then a gnat; yet it is a being not tangible. However potent its agency, however miraculous and infinite its powers, the mind of man cannot comprehend its character. Whether the "life" results from the physical aggregation of material particles, or organisation be produced and regulated by this principle, is a problem that will perhaps never be solved. We see matter in the absence of life, but we never see life, nor can we form any conception of its nature, unconnected with matter. We recognise life in the motions and actions of bodies, but we know nothing of its essence; we see matter assuming various forms, and executing particular actions, and we denominate these phenomena collectively, "life."

We witness the growth of a blade of grass, we notice its appearance and development, and we say that it lives: this is all we know respecting life. Vegetables have life, and animals have life. Each grows, passes through a successive series of changes from its first evolution to its full development, perpetuates its species, then "withers and dies." The cause of these phenomena is pronounced to be *life*. But animals are, in general terms, distinguished from the vegetable world by two remarkable properties,—*sensibility* and *contractility*, the power of perceiving the existence of surrounding bodies, and displaying this cognisance by motion. Plants are fixed to the earth, animals roam on its surface; hence we see the wisdom of the Creator manifested in not endowing the vegetable world with these two properties.

Life may apparently be displayed, despite of a nervous system; but sensibility and contractility are invariably co-existent with it. Were we disposed to speculate, we might prove that life in the higher orders of animals has its seat in the sympathetic system of nerves, and mind in the cerebro-spinal, and that the two principles are dissimilar and isolated, but that they are capable of acting and reacting on each other, whether directly or indirectly.

Life, like inflammation, implies simply the existence of a certain number of phenomena; and the quantity of life, or of inflammation, is in a ratio to the intensity with which these phenomena are presented.

Living bodies, Dr. Roget narrates, augment their bulk by receiving nutriment into their interior, and converting it to a substance like the being which imbibes it, unlike inorganic matter which enlarges its size by the aggregation of particles on its exterior; and the end of life is death, when the particles of living bodies revert again to their original condition—lifeless, and they putrefy.

"By turns we catch the vital breath and die."

Worms feed on our dead bodies. Man subsists on his fellows, like the fish of the ocean.

Vegetable organisation is briefly considered. The structure of plants, their minute mechanism, the functions of each part, and the relations in which the vegetable is placed to the animal and mineral kingdoms, are eloquently described. The "mechanical design," the "be all" of the work is admirably illustrated.

We then arrive at the great subject—"Animal Organisation," where we view the whole expanse of the animal creation, from the animalcule to man, and from the homunculus to the highest intellectual being.

It is interesting to view the order in which the varied classes of animal beings are placed towards each other,—the graduated scale which is presented from the polypus to man. Dr. Roget has here displayed a consummate knowledge, not only of human physiology, with which, as a distinguished physician and philosopher, he is supposed to possess an intimate acquaintance, but he has developed a most extensive knowledge of the whole system of animated nature. There never was a treatise in which the subject was so candidly, so philosophically, or so eloquently discussed as this on "Vegetable and Animal Physiology."

But, to cease panegyric and eulogium, let us advert to its important and chief contents.

The classification of Cuvier in the animal kingdom has been adopted. Not a better could have been selected; as, in the teaching and in the elucidation of chemical facts, one great principle has been observed, that of commencing with simples and proceeding to compounds.

This same principle has been observed by Roget. We have first a notice of the primary elements of animal bodies. The question as to what is the fundamental tissues, is elaborately discussed. The conclusion is, that it is the cellular tissue, the frame-work of vegetable as well as of animal bodies; a position which we believe is universally admitted. We know that the mechanism of its elementary fibre has given rise to diversity of opinion, but it is really a matter more of speculative than of practical importance. Whether this elementary fibre consists of a series of spherules, or of ovoid bodies, is but of little utility. The cellular tissue, it is believed, is diffused throughout every part of the animated fabric, serves as a support to all its more delicate structures, affords a bond of union to all its parts, isolates many organs, in action and in disease, but, moreover, unites many in sympathetic relation. It is, unquestionably, a great secreting apparatus, whether it exists in the form of a net-work, or be woven into a sheet of membrane, and performs the important offices of allowing the different organs to resume their position when displaced, and to move freely upon each other by its elasticity, and by its serous exudation; it is truly, substantially, wherever it exists, *a serous structure*. The modifications which it otherwise undergoes, described by Dr. Roget as forming receptacles, canals, vessels, &c., admits of further inquiry; these are not truisms, but very doubtful subjects. We are, however, on account of our limited space, not permitted to enter into the field of controversy; we shall not, therefore, throw down the gauntlet. Cartilage, ligament, muscle, nerve, &c., are component parts of animal organisation, but their composition and function we cannot discuss. There is a topic which we must not omit, that is the development of the animal kingdom.

"An hypothesis has been advanced that the original creation of species has been successive, and took place in the order of their relative complexity of structure, and the standard types have arisen the one from the other; that each succeeding form was an improvement upon the preceding, and followed in a certain order of development, according to a regular plan traced by the great Author of the universe for bestowing perfection on His works. This gradation of structure was necessarily accompanied by a gradation of faculties; the object of each change of type being to attain higher objects, and to advance a further step towards the ultimate ends of the animal creation. Many apparent anomalies, which are inexplicable upon any other supposition, are easily reconcileable to this theory. The developments of structure belonging to a particular type being always prospective, are not completed in the inferior orders of the group formed upon that model, but remain more or less imperfect, although each organ always fully answers the particular purpose of the individual animal. But it sometimes happens that the imperfection of an organ is so great, in consequence of its development having proceeded to a very small extent, as to render it wholly useless in that particular species, although, in a higher race of animals, it fully performs its proper function. Thus we shall find that rudiments of feet are contained within the bodies of various kinds of serpents, which can obviously not be servicable as organs of progression. In the young of the whale, before its birth, there is found in the lower jaw a row of small teeth, which do not rise above the gums, and can, therefore, be of no use as instruments of mastication. Their further growth is arrested, and they are afterwards obliterated. This imperfect, or *rudimental*, condition of an organ indicates its relation to other species belonging to the same type, and demonstrates the existence of a general plan in their formation."

This is an hypothesis, certainly! If it be true—man, now a biped, was once a quadruped. We know that in the womb he is a grub—in the grave, dust and ashes. We believe that he transmigrates through the forms of every animal species in his passage from the period of his entrance into the uterus to his birth.

From the musci that grow on the wall to the subject of man, Dr. Roget perceives every

where beauty, and infers not only the existence, but the wisdom, of an Almighty fiat in all nature's works. Galileo was satisfied of the existence of a God by a simple straw. Dr. Roget had a wider field to prove His goodness and power—the living universe, with its countless myriads of beings for illustration. We congratulate him on the copiousness of illustration which his subject afforded; where he might see "sermons in stones, and rivers in running brooks."

Had we written this work, we should not be ambitious to write another, believing we could not again write so well. In its kind it is unparalleled. We strenuously recommend it to the student in medicine particularly, as well as to the general reader. Certainly it has not an equal in its kind. It is not elaborate or profound, dictatorial or egotistical,—but it is comprehensible, eloquent, and useful.

ON HERPES OF THE GLANS PENIS AND OF THE PREPUCE.

BY ALPH. CAZENAVE.

(*From the Bulletin Generale de Thérapeutique.*

Herpes, affecting the prepuce and glans, constitutes a disease of apparently a slight nature, but it is rendered, nevertheless, of a sufficiently serious character, by the mistakes which are made daily, and by its obstinacy, when it becomes chronic, to require considerable attention in studying it. It has been scarcely alluded to by the majority of those pathologists who have written on diseases of the skin. Willan does not make any mention of it in his work, but Bateman gives an excellent description of it; and every year, in his course of clinical lectures, M. Biett draws attention to this important variety, on the history of which he has thrown considerable light.

Herpes preputialis consists of vesicles formed into more or less numerous groups, situated on the external or internal surface of the prepuce; these vesicles are preceded by small red spots, the appearance of which is indicated by violent itching; the variety, in which the vesicles are external, does not differ from common herpes, but when they show themselves on the internal surface of the prepuce, or on the glans, where they are still more common, they have a very remarkable appearance. These vesicles, which are speedily distended by a sero-purulent fluid, are so exceedingly thin as to tear readily, leaving a slightly excoriated and red surface, which has been mistaken for ulceration; this is the source of error already alluded to, for it most frequently happens, that the vesicles are no longer in existence when the physician is called in.

We then perceive an unequal redness of greater or less size, surrounding the prepuce, or glans, exactly as the zona surrounds other parts of the body. This excoriated surface is generally covered, at least when the disease has become chronic, with a whitish pellicle, which is removed every time the prepuce moves upon the glans, for those individuals, who have a partial or complete phymosis, are most liable to this complaint. There is in that case an exudation, an habitual secretion which keeps up the disease.

Herpes preputialis, whether in the vesicular state or in the form of excoriations, has been often mistaken, and it is being constantly treated as a syphilitic complaint. M. Biett mentions in his lectures many remarkable cases, and, among others, that of one of the most celebrated European composers, in whom, by means of canterising and mercurial preparations, a very simple complaint had been rendered worse, and continued eighteen months.

I have been consulted for some days past by a young man, who has herpes of the glans; he was only waiting until he was cured to get married, and was much disturbed at it, as he considered it to be the remains of a previous attack of syphilis. Regulating the diet, and the use of emollient applications for a few days, entirely freed him from his complaint, which had been exasperated by caustics and by topical stimulants.

It will be readily conceived, that the diagnosis of a disease, the seat of which in the prepuce and glans has often caused it to be considered venereal, is of some importance.

This importance does not bear reference to the *morale* of the affair, although that is of some consequence to a young man on the point of marriage; but it concerns the disease,—its treatment and results. Herpes perputialis is, in fact, a slight affection, when it is not mistaken; it is an acute eruption which very

generally yields in a little while to simple measures. When, on the contrary, as it more frequently happens, the inexperienced practitioner, looking only to its seat on the genital organs, mistakes it for a primitive syphilitic affection, and treats it with escharotics, mercurial frictions, &c., this simple affection becomes an obstinate and sometimes a serious complaint.

When the herpes preputialis has been seen a few times, it becomes difficult to conceive how it could have been considered a syphilitic disease; while, in its vesicular state, it could never have been mistaken; for, let them say what they will, the venereal ulcer never commences by a vesicle, but rather by a redness of the skin, which becomes excoriated by ulcerative inflammation; it could not even be mistaken for certain syphilitic varieties, which have been described by the English physicians, and especially by Evans. We have not a single vesicle which might be mistaken for the syphilitic pustule, but we have several vesicles formed into groups, &c. Still later it would be still more difficult to fall into error on this subject. In fact, the ulceration, or to speak more properly, the slight excoriation, which follows the vesicle of herpes, in no way resembles the venereal ulcer, whatever form it may take. It is a slight erosion, the surface of which is of the same level in the centre as at the circumference, which does not destroy any part, or leave any traces behind it. In all cases the least analogy will be found in the disposal of the excoriations into irregular bands, or zones, around the glans or prepuce, and which does not resemble any thing, except, perhaps, the phagedænic ulcer, which, however, has so remarkable a difference from it, that is useless to dilate upon it.

Whether the disease has continued to make progress, in spite of proper treatment, which happens very rarely, or whether, as I have already said, and which is indeed the most common occurrence, in consequence of an error in the diagnosis, it has been kept up and exasperated by escharotics and stimulating applications, it is liable to assume a chronic form, and then assumes a more or less unpleasant character. The glans and the prepuce are the seat of a more or less abundant discharge, and sometimes even they are covered with a kind of pseudo-membrane, which is easily removed, and leaves behind a very red moist surface. This condition may last for years, and a very remarkable circumstance is that it may present, if not complete intermissions, at least well-marked remissions; the redness diminishes, the albuminous secretion almost completely disappears, a few red points only remain, a cure seems on the point of taking place, but, all of a sudden, without any appreciable cause, the same symptoms re-appear, and with them more or less intense pain, and attended with that degree of depression which always accompanies this disease when it becomes chronic. M. Biett and myself have examined this complaint, and ascertained the existence of these symptoms in an old man, residing at Belleville. In him, also, the termination was fatal. After having resisted the various remedies previously tried, the herpes seemed to be yielding to the arsenical preparation: the patient had one of the longest remissions he had ever enjoyed, when he was suddenly seized with a *stomatite couenneuse*, under which he sunk in a few days. This affection presented some extraordinary phenomena; it proceeded from without inwards, attacking first the internal surface of the lips, it affected next the gums, then the side of the mouth, and thus insensibly invaded the pharynx, larynx, &c., and destroyed the patient, in spite of the most energetic treatment, even the application of caustic. Was there any analogy in this complaint with the old (*couenneuse*) affection of the glans penis. I confess that I am tempted to believe it.

In its chronic state, the herpes, especially when it occupies the prepuce, causes a thickening of the cellular tissue, and consequently a true phymosis, not only very painful but serious even, since it may prevent the performance of the acts of generation. In this case it may be confounded with another disease, which has been exceedingly well described by M. Biett, and which is also characterised by a narrowing of the opening of the prepuce, the formation of painful fissures, the impossibility of uncovering the glans without inducing bleeding, &c., I am alluding to *psoriasis preputii*, but in this latter complaint the thickening is greater and more firm; there are also scales (*squammes*) which are not present in herpes, and, on the contrary, the discharge does not take place, &c.

Besides it is not as if it were syphilis, and the error would not be serious.

Herpes preputialis more especially attacks adults and old men. Mr. Copeland, a surgeon, residing in Golden-square, has remarked, that this disease is often induced by irritation, or stricture, in the urethra (*Bateman*). This was also the case in the old man of whom I have already spoken.

Herpes preputialis, in its acute form, generally lasts but a short time; it yields to emollient applications; fresh lotions, local baths of bran-water, or marsh-mallow infusion, moderate diet, with refreshing drinks, barley-water, lemonade, &c., and general baths should be also employed.

The treatment of the disease, in its chronic form, is much more difficult. Independently of the periods of super-excitement, in which we have been obliged to have recourse to emollients, M. Biett and myself have derived advantage from chloruretted, or sulphuretted lotions, with the addition of one or two spoonfuls of the *eau de Barèges*, or *d'Enghien*, in a pint or a quart of bran-water; when the discharge was abundant, alkaline lotions (sub-carbonate of soda, ℥j. — ℥ij.; distilled water, lb j.), with local emollient baths, alternated with alkaline or sulphureous ones, are of use.

In general ointments are of no use; nevertheless, when the disease is certainly chronic, M. Biett has used some with advantage, made either with calomel (hyd. subm. gr. viij.; camph. gr. viij.; axung. ℥j.), or with the sub-carbonate of potash (potass. sub-carb. ℥j.; axung. ℥j.)

But sometimes the disease resists all these means, and we have seen cases, with M. Biett, which required energetic internal remedies. Thus M. Biett has occasionally ordered with success Pearson's solution, beginning with a few drops, and increasing the dose to a drachm in the day, according to the effect of the medicine and the constitution of the patients. It was of great advantage in the case of the old man already alluded to. Escharotics, which seem to be indicated, have not been generally successful.

The treatment is often very difficult, and especially very variable. Emollients and resolvents, narcotics and stimulants, must be alternated, without its being possible to indicate, *à priori*, how far one is preferable to the other.

In all cases, where the narrowing of the opening of the prepuce is sufficient to cause phymosis, and does not yield to emollient baths, or the sponge, the operation must be performed. Finally, when the disease has existed a long time in an old man, accompanied with a very abundant discharge, &c., it would perhaps be prudent to establish a blister, or an issue, in the thigh, before attempting a radical cure.

THE

London Medical and Surgical Journal.

Saturday, October 4, 1834.

SCIENTIFIC SOCIETIES.

We are glad to find that the utility of general scientific associations is beginning to be appreciated. For a long period local societies have been instituted, but they have too generally been confined to the members of the respective professions. Thus we have had Medical Societies, Geological, Botanical, Societies of Antiquaries, &c. But they have been frequently inefficient, inasmuch as the topics discussed have been interesting only to the particular members of the particular pursuit. Hence knowledge on the different subjects has been circumscribed in its diffusion, and the want of concert, as it were, between the various branches of science, the illustrations and assistance which one body of individuals might have afforded to another have been thereby excluded. The members of our own profession, with but a few exceptions, have regarded the study of medicine as a sufficient occupation, without having recourse to the collateral sciences. It has become obvious, however, that there is an intimate connexion between all sciences, that one is mutually dependent on the others, and that he whose mind is stored with information from all sources is proportionately able, not only more clearly to com-

prehend the doctrines and truisms in his own department, but is possessed of a key to the elucidation of any abstruse subject or original proposition. What, for example, has not chemistry achieved in enabling us to recognise the most dire diseases, viz.—of the urinary organs? Have not the researches of pathologists, guided by the science of chemistry, enabled them to determine with an almost miraculous certainty the cause of anasarca, as indicated by the presence or absence of albumen in the urine? Was it not from the principles of natural philosophy that the mind of Laennec was directed to the immemorial discovery of the stethoscope: from a knowledge of the laws of gravitation, to the cure of inflammation, or of varicose veins of the lower extremities? Does not an acquaintance with the principles of mechanics teach the surgeon how to adjust a fractured limb, and reduce a dislocated bone? Without a knowledge of optics we could not comprehend the physiology of vision, or detect the minute shades of aberration of this function. Without acoustics we could not understand the multiplied phenomena of sound received by the healthy or diseased aural apparatus. Pneumatics teaches the nature of respiration; hydraulics, the circulation of the vital fluids. A countless number of illustrations might be adduced to prove that an accomplished physician or surgeon should possess an extensive or general knowledge of all bodies which surround him, of matter, whether living or dead. Dr. Johnson said that a reviewer should be acquainted with all languages; we may say, that a medical man should be acquainted with all sciences. The exigencies of the times, the "march of intellect," as well as a philantrophic feeling, alike demand much exertion.

It is gratifying to see the organisation of such meetings as have been instituted within the last few months, such as have taken place at Edinburgh, Cambridge, and many provincial towns, and the one which was held during the last month in Germany; where men, of any nation or profession, any creed, political or religious, are admitted to partake of the intellectual banquet; where kindred spirits can associate for one great object,—the elucidation of all that may be curious in science or in art; where science in all its branches can be brought to bear on such paramount subjects, as in exercising the reflecting faculties of man, in inspiring him with laudable ambition, and acquiring for him nutriment and happiness in health, medicine and solace in affliction. Such a coalescence of talent will undoubtedly assist materially in producing a new era in philosophy and physic, and elevate the scientific character of the British nation, if not beyond that of any other European country, unquestionably upon an equality with it.

The Medical Societies in this great metropolis are of immense utility: they afford the opportunity for men to propagate their opinions, to announce any new methods experience may have given them of treating disease. Unfortunately, they have one serious evil, being often conducted with animosity and party-spirit. We trust, however, that in the present session the science of medicine will engross the attention of the members, and that political warfare will no more be renewed.

CHOLERA—DEFEAT OF THE CONTAGIONISTS.

A TIME like the present was scarcely ever known to exist; the term *contagion* has been flying from one quarter of the globe to the other, chasing with speed its victims,

who, not finding either hole or corner for repose, have at length been driven to combat with their enemy, or else, worn out by alarm, have fallen down and submitted to the torments of its rage. Never did disease create such unnecessary fear, never were there, from any epidemic, so many slaughtered by healers of the art, as in the reigning malady, termed cholera. It is true, that the epidemic in itself is dreadful, but, as regards its contagious nature, it is as harmless as a lamb. The evils that have resulted from this absurd term, *contagion*, can scarcely be paralleled; commerce, for a time, throughout the empire destroyed; thousands ruined; and numbers reduced to a state of beggary, and all through this misguided timidity. It is then, and we hail it with pleasure, a blessing to the human race, that this bigotism has at length found its level, and tenfold is our triumph now we observe that the inhabitants, in every quarter of the universe, have opened their eyes, and unanimously declared to send contagion and its followers to an everlasting doom. Could but the distress be conceived, that has been produced by this simple *word*, we are sure many would sympathise with us for the afflicted. On reflection, is it not surprising, even unpardonable, that it should have first issued from the mouths of those who are so fully aware of its baneful effects upon the mind, and who so well know, or at least ought to know, that the mind, being harrowed by such an idea, weakens the nervous energy, debilitates the constitution, and renders it in reality prone to disease? We hesitate not for a moment to advance, that as many, if not more, have been afflicted from this constant, prolonged, agitated sense of dread, as from the natural tendency of the constitution to become prediposed to this affection. We have shown our wrath long since, but too long was our opinion unheeded, and few were there who would coincide with us, or even listen to our suggestions. The mischief was committed, many death-warrants signed, before those, who had the power of investigating the disease, could perceive that it was not so contagious as the loose cash which floated in their pockets.

Even at the present time it is a question with us, especially if a *pecuniary epidemic* again issued forth, whether the same party would allow the non-contagious nature of the disease. The examples, however, that have been made, putting aside the *general* opinion of the professions of this country, both in France, Russia, and Spain, would prevent such a catastrophe again taking place. It is true, in these foreign countries, contagion was their first idea, and nothing could be more proper than to have first put the means in execution to prevent its propagation, in case such should have been the case. But what was the result?—From minute investigation they found that the disease raged in all quarters, broke out in places of every description, without discovering the slightest trace of infection. Moreover, they observed the horrors the term produced upon the people, the distress caused by the quarantine, the frightful scenes occurring among families of every description,—children, in consequence, deserted by their parents, those afflicted by the malady left to perish without assistance,—in a word, every thing inhuman and wretched, without assuaging in the least the raging of the malady. With these dreadful scenes hanging before their eyes, the profession united together, and made known to their governments their unanimous conclusion, which was the dangers of the *word* contagion, and its harmlessness in reality. Also, we

perceive the same result at Madrid, where the disease has been raging within the last few months with greater violence than before, and though, not many months previously, the inhabitants of the Spanish territory were suffering from the tyranny of contagion. But mark, gentle reader, the effects in this capital; no sooner had the medical faculty come to this conclusion, than the disease which had been destroying hundreds daily, saving neither rich nor poor, and the opinion of their medical heads made public, than the fury of the disease became calmed, thus showing the consequences of dread in predisposing the constitution to this dreadful malady. It is needless for us to waste more time, pens, ink, or paper, on the few remaining contagionists of this country; they are not, as a sportsman would say, worth shot, much more the powder necessary to discharge them; but, we are happy to say, that many are there who were once, in every sense of the term, lovers of contagion, now its most bitter enemies; and we feel confident, one day, sooner or later, that those who persist in this absurdity will, from some glaring fact, see their error when too late, and then, like raving madmen, place their hands upon their heads, and, with smitten consciences, one and all, say,—Alas! reptiles within our craniums, by you we have been misguided, expand your withered tails, and guide us in the paths of the non-contagionists!

ELECTION FOR PHYSICIAN TO ST. THOMAS'S HOSPITAL.

On Monday last a general election took place for a physician in this establishment, vacant by the resignation of Dr. Elliotson. Dr. Burton was elected to undertake this important duty.

Reports of Societies.

LONDON MEDICAL SOCIETY.

Monday, Sept. 29th, 1834.

W. Kingdon, Esq., in the Chair.

The session was commenced last Monday with the reading of an essay written by Dr. Shearman, on "The Influence of previous Attacks of Ague in determining the Type of future Accessions of Fever." The author was induced to pen the article, by reading a remark made by Sir A. Cooper, as given in his lectures, published in the *Lancet*, and which is to the effect—that persons having suffered from ague, whenever after attacked by fever, are affected with it in the typhoid form. This statement, although emanating from such authority, Dr. Shearman is very much inclined to doubt. The expression itself appeared to him to be vague; it did not exactly specify whether or not the typhus fever was alluded to, or merely low fever attended with typhoid symptoms. He thought the latter; for the essential character of typhus was its contagious property, which no one could attribute to an attack of fever from cold. He must therefore consider that Sir A. Cooper alluded to a fever in contradistinction to the inflammatory type, and not having any reference to its contagious powers. Admitting this to be the case, he still differed in opinion with Sir A. Cooper; for he must consider that the type of the consequent fever would depend rather on the degree of strength or debility of the patient, than on the previous attacks of ague, unless the patient had suffered from it so recently as not to have recovered from its effects. Inflammatory fever will and does follow as readily in cases where ague had previously existed, as will the typhoid form. Intermittents exert a modifying influence on fever generally, and that of a beneficial nature, inasmuch as, after two or three attacks of ague, the system assumes a predisposition to the intermittent form, and hence typhus occurs; it readily changes to either the remittent or intermittent variety.

The essay itself did not excite much attention, giving rise rather to desultory conversation on typhus, intermittents, and miasma, than to an examination of the real question at

issue, namely, do previous attacks of ague exert any influence on the type of consequent fever? the essayist being of opinion that it certainly exerts a modifying and beneficial influence, by assimilating it to itself; that is to say, rendering it either intermittent or remittent.

The principal speakers were Drs. Clutterbuck, Shearman, and Whiting, Messrs. Kingdon, Dendy, and Clifton. Dr. Whiting objected to contagion being considered as an especial character of typhus fever, as ten thousand cases might arise, which could not be traced to contagion. He agreed with Sir A. Cooper, and was of opinion that when the system had been affected with ague, it would, by producing debility, act as a predisposing cause, and thus render any symptomatic fever, which might arise in consequence of an accident, of a low type. Fever, however, under such circumstances, arising from common causes, would assume more of the intermittent or remittent character.

The question having been agitated respecting the influence of marsh miasma on the system, Dr. Whiting observed that he considered the marsh miasma did not produce any injurious effects on the system, otherwise than in the production of actual disease. He allowed, however, that the effluvium from ditches and other places, arising from decomposing animal and vegetable remains, would have that effect, but that effluvium was totally distinct from malaria. He then alluded to visceral disease, which he described as occasionally consequent on intermittent fever.

Dr. Clutterbuck differed in opinion with him here; he considered these visceral engorgements to be primary complaints for the most part, and not dependent on ague, and he grounded his opinion on the fact, that in districts liable to marsh miasma these complaints were far more prevalent than the ague itself. He said also, that St. George's Fields, when a mere marsh, were a fertile source of severe intermittents; but since the period to which he alluded, from perfect draining, and the spread of the population in that neighbourhood, the malaria was modified, and consequently its effects also.

In the course of the evening a gentleman stated that he had had a case, the first he had met with, of an elderly person, who had been affected with intermittent fever for three weeks, and the crisis was marked by the supervention of incurable amaurosis in one night. The individual had been accustomed to use glasses in reading. The members present did not appear to have met with anything similar.

Foreign Medicine.

ACADEMIE DES SCIENCES.

Sitting, Aug. 25th, 1834.

Condensation and Rarefaction of Air, extended throughout the Body, or on the Limbs only, and its Therapeutical relations considered.

BY THEODORE JUNOT.

By the assistance of a peculiar instrument that Mr. Junot describes, he can either increase or diminish the atmospheric pressure on the whole of the body. When the natural atmospheric pressure is increased on the human body placed in a receiver, the following phenomena are observed.

1st. The membrana tympani is relaxed and pushed towards the internal ear, and causes a very unpleasant sensation. This sensation is dissipated by degrees, as an equilibrium is established.

2nd. The respiration is increased, the capacity of the lungs for the reception of air appears increased; inspirations are longer and less frequent; in the course of fifteen minutes a very agreeable sensation of heat is produced in the interior of the thorax.

3rd. An increase of the density of the air appears to modify, in a remarkable degree, the circulating system. The pulse is increased in frequency, full, and with difficulty compressed. The calibres of the superficial veins diminish, and sometimes are entirely closed. The brain receives a greater supply of blood, the functions of which are rendered more active.

4th. The salivary glands and kidneys secrete abundantly, and this phenomenon appears to extend throughout the glandular system.

If, on the contrary, one-fourth of the natural pressure is diminished,

1st. The membrana tympani becomes distended, which produces an analogous sensation to that which is caused by compression. As the equilibrium is established, the sensation is dissipated.

2nd. Respiration is difficult; inspirations short and quick. In the course of 15 or 20 minutes dyspnœa becomes urgent.

3rd. Pulse full, depressible, and frequent. The whole of the superficial vessels are in a manifest state of turgescence. The eyelids are distended from superabundance of fluid. Very frequently hæmorrhages supervene, with symptoms of faintness. The skin is uncomfortably warm, but slight activity of hæmatosis. The superabundance of blood in the superficial vessels, explains the complete want of energy in the individual who is submitted to the experiment.

The salivary glands and kidneys, which secrete a greater quantity than natural under pressure, present, on the contrary, an effect entirely different.

M. Junot applied the pressure and rarefaction of the atmosphere to the limbs. Besides the local phenomena, which may naturally be supposed to take place from increase of pressure, he signalised the following general phenomena: dizziness, tinkling in the ears, difficulty in respiration. Rarefaction of air tried in the same manner, produced, on the contrary, the following phenomena: the head lighter than natural, paleness of skin, tendency to syncope, easy respiration; nausea occasionally supervenes.

M. Junot has applied his apparatus to therapeutics, and he has reported three observations, in which dyspnœa and nervous symptoms have been alleviated by its use.

A Memoir on Engorgement of the Prostate Gland, and Paralysis of the Bladder—New means of treating Retention of Urine from this cause.

BY M. LEROY OF ETIOLLE.

M. Leroy recalled the attention of the Academy to a memoir that he had already read on this subject, and persisted again on this pathological alteration of the prostate, which in a number of cases is overlooked in consequence of retention of urine. After this he exposed the best means of combating this disease. The first thing that he endeavours to attain is a decrease of the prostatic tumour, which forms, he states, a kind of valve before the vesical orifice. Thus a depression is executed in the following manner. A catheter, with a curved mandril, is introduced into the bladder, the mandril is withdrawn, and in its place is introduced a straight one, which, by gentle force, by means of a screw at the end of the bougie, is made to penetrate. This small apparatus remains in the urethra for thirty minutes or an hour. Many times a single application has been sufficient to combat a retention of urine of long standing, and which from every other remedy has remained obstinate. At other times, its application is necessary five or six times before this effect is obtained. Tumour of the prostate is not always situated above the neck of the bladder; in a few cases it is produced by a development of the lateral lobes. Depression in these cases can be of no service and dilatation of the neck is more beneficial.

Finally, when neither depression of the prostate nor dilatation of the neck is sufficient to counteract the retention, M. Leroy has attempted ligature of the tumour, by means of instruments which he has invented for that purpose.

His paper terminated by a series of cases of retention, which he had recovered by the means above stated, after all other remedies had failed. The following are the results,—19 cases of application, 16 cures. Those cases in which the application did not succeed, found no ill consequences from the attempt made.

SOCIETE DE MEDECINE PRATIQUE.

On the Diversity of Action of Medicamentous Substances on our Tissues.

M. Nauche endeavoured to establish from his own observations, that the action of medicaments on every tissue was different, and that it is diametrically opposite in many of them.

When the surface of the brain of a living animal is touched with nitric acid, no sensible sign is given, but if the membranes or different parts of the tissues are touched, it roars with pain.

Opium and its compounds, cold, ice, acids, particularly the hydrocyanic, alkalies, bitters, camphor, assafœtida, different preparations of lead, iron, zinc, arsenic, applied on a denuded surface of the body, and on some parts of the fibro-vascular system, act as excitants; they produce irritation, pain, and inflammation; but on the brain or pulp of the nervous system are for the most part to a certain degree

sedative; they weaken the powers of this organ without producing any sensible phenomena, or primitive inflammation, or irritation.

Heat, mucilage, sweet wines, æther, sanguineous evacuations, are sedatives on the fibro-vascular system, and excitants on the tissues of the cerebro-nervous system.

A knowledge of this diversity of action gives a cause to many inexplicable practical facts, after the similitude of the action of medicaments on our tissues. This may throw a new light on diseases, and on the proper means of combating them.

Foreign Hospital Reports.

HÔTEL DIEU.

Abscess of the Brain.

Case I.—A woman, 47 years of age, was admitted, July 31st, into Saint Paul's Ward, of this hospital. Stated, she had not menstruated for eighteen months, and since then had constantly been attacked with pain in the head, for which she had repeatedly applied leeches. From these, for a short time, she experienced relief, but, on the day of her admission, the pain was more acute than before, occupying the superior and anterior part of the head. The following was her condition at this time: intense cephalalgia, frequent vomiting, with slight symptoms of hysteria; had no paralysis, or any external symptoms indicating organic lesion of the brain or spinal cord; tongue white; bitter taste in her mouth; matter ejected from her stomach of a bilious character; pulse frequent; respiration natural. The next morning all symptoms were changed; stupor, with diminution of muscular movement; the right arm had become nearly powerless; answers incoherent; pulse 56. On the third day the symptoms became more urgent; could lie only on her back; respiration 18; pulse 52. No strabismus, or dilatation of pupil; the superior and inferior extremities of the left side became in a complete state of resolution; slight retraction of the mouth to the right side; general loss of sensibility; face flushed; tongue covered with whitish mucus. The symptoms continued to increase; on the fourth day there was insensibility of the left eye; the distortion of the mouth became greater; the pupils were more contracted; however, there was some slight muscular resistance in the lower extremities. About four o'clock the pulse became exceedingly quick; respiration 24 in a minute; and in the course of the evening she died.

Autopsy.—Nothing remarkable was apparent on the external surface or meninges of the brain, but a large abscess occupied the posterior part of the right lobe of the cerebrum. The matter contained in the abscess presented all the characters of pus in other parts of the body, and was circumscribed by a false membrane. Numerous granulations were observed on its internal walls. The cerebral substance surrounding this abscess was of a gelatiform consistence. The walls of the ventricles were also in a state of ramollissement; some slight sanguineous effusions were observed in the cavities.

Case II.—*Symptoms of extensive Cerebral Disease—no trace of Lesion after Death.*—The child, the subject of this disease, was 14 years of age, and had enjoyed, till his present illness, good health. Whilst in the country he was climbing a fruit-tree, and suddenly fell down in a state of unconsciousness. At this time all symptoms of epilepsy ensued. He was instantly brought to Paris, and on the road the same symptoms, at different intervals, made their appearance. He soon, however, became sensible; his sight only became affected, and he was unable to see objects around him. He complained of no pain, and answered all questions put to him. Soon, a second attack supervened, and since then he has been in a state of coma, with the exception of the time the accession of epilepsy ensues. When admitted into St. Madeleine's Ward, decubitus on the back, head slightly inclined to the right side, countenance extremely pallid, eyes half open, pupils fixedly dilated, complete loss of power of the extremities, general insensibility, respiration strong, pulse frequent, moderate heat of skin, constipation, involuntary discharge of urine. Before his admission, leeches and sinapisms had been applied to his body. He was ordered to be bled from the foot; two hours afterwards twenty leeches were to be applied behind the ears, cold lotions to the head, &c. The next day he remained in the same state, and died the following morning.

On the autopsy, which took place twenty-two hours after death, the brain was minutely examined, but not the slightest lesion could be traced in the cerebral organ; the spinal cord was also explored, and there no lesion could be detected.

British Hospital Reports.

ST. THOMAS'S HOSPITAL.

The cases at present in the hospital are devoid of much interest. The physicians' wards are filled principally with rheumatic and chronic

cases, but the surgeons' wards contain many interesting accidents. Several operations are to be performed this day (Oct. 3rd), at 1 P.M., amongst which are two cases for stone; the others are minor operations.

Cholera after taking Créosote.—Anne Ross, who had been for some time in Mary's Ward, and was admitted for disease of the uterus, which, after repeated investigations, appeared to be a sarcomatous state of that organ, was, by Dr. Elliotson, ordered to take the créosote; but, previous to this, other medicaments were prescribed, without in the least calming the sufferings of the patient. After taking this medicine for some time, which at last became increased to twelve minims, three times daily, all symptoms of the uterine disease ceased, and she said her health was better than it had been for some years. On the 19th of last month she was taken with violent purging and sickness, cramps in her limbs; in a word, every symptom of the most intense form of cholera. At the expiration of two days, after suffering the most intense agony, nature became exhausted, and she fell a victim to its ravages. Unfortunately, no post mortem examination was permitted, therefore it was impossible to discover what process had taken place in the sarcomatous uterine organ; though, on examination per vaginam, almost a week previous to the attack of cholera, the induration of the mouth of the uterus had considerably decreased.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.

Interstitial Abscess—Ulcer of the Cornea.

William Field, æt. 4, residing at 21, Brook-street, in the New-road, was admitted Nov. 25th, with interstitial abscess, and external ulceration of the cornea of the right eye, accompanied with purulent matter in the anterior chamber. This eye has been slightly inflamed for the last three months, but since an attack of typhus fever, which the child suffered six weeks back, the inflammation has very much increased. There is now an ulcer near the centre of the cornea, which has lost its transparency; there is also a small quantity of matter at the bottom of the anterior chamber; the conjunctiva and sclerotica are very vascular; lids not much swollen, but the tarsi are inflamed at the outer canthi; the iris does not appear to participate in the complaint, but cannot be distinctly seen, on account of the diseased condition of the cornea; the margins of the ulcer are white. The child does not complain of much pain in the eye, and can bear exposure to the light. He suffers from severe headach.

℞. Hyd. subm. gr. j. Sulph. quinin. gr. j. —Conf. q. s. ut fiat pilula.—5tâ quâquâ horâ sumend.

28th. Has taken the pills regularly; ulcer cleaner; inflammation diminished; less pain in the head; mouth sore. Cont. pil. 6tis horis.

30th. Eye much the same; gums not at all affected by the mercury. App. emp. canth. vertici capitis.

℞. Hyd. subm. gr. ij.—Conf. q. s. fiat pil. —Sextâ quâquâ horâ sumenda.

Dec. 2nd. Not improving; mercurial effect not produced. To take the pills every four hours; the blisters to be kept open. App. gutt. arg. nit. gr. iv. ad ℥ ij. aq. distill.—Ad ocul.

3rd. The ulcer is getting larger and more opaque; conjunctiva and sclerotica more inflamed. Rep. pil. App. gutt. gr. viij ad ℥ j.

4th. The ulcer and pus remain *in statu quo.* Complains of pain in the head, but the eye is quite easy; he cannot bear the light on account of the pain it induces. App. gutt. arg. nit. gr. iv. ad ℥ j.

℞ Hyd. subm, sulph. quinin. ana gr. j. —Conf. gr. v.—Fiat pil., omni horâ sumenda.

5th. The pain in the head continues, and the ucer is not improved in appearance; mouth unaffected. Rep. gutt. et pil. sine quininâ. —Omni horâ.

6th. The eye is a little better; mouth slightly affected; there appears to be less matter in the anterior chamber; cornea clearer; bowels rather purged.

℞. Hyd. submur. gr. vj. Pulv. opii. gr. j. —Misce, et divide in chartulas sex.— Quarum capiat æger unam omni secundâ horâ.

7th. Is much better; conjunctiva and sclerotica much less inflamed; the cornea more transparent; ulcer smaller and less opaque; the quantity of matter in the anterior chamber diminished; bowels not so irritable; the mouth is now sore, but still very slightly so; he slept better last night than since the commencement of the inflammation; no pain in the head now. Rep. pulv. et gutt.

8th. Not quite so well to-day; rather more inflammation. Rep. pulv. et gutt.

9th. The inflammation again lessening, and the ulcer looks clearer. Pergat.

10th. the eye is evidently improving; no pain; the ulcer is smaller, and the cornea clearer; the matter in the anterior chamber is disappearing; mouth rather more affected; one or two large vessels, running to the site of the interstitial deposit, touched with the argenti nitras. Pergat.

12th. Continues to improve; ulcer healing. Rep. gutt. Pil. omni secundâ horâ sumenda.

13th. The matter in the anterior chamber has almost wholly disappeared; the blister on the vertex is still open. Cont.

The next day the mercury was omitted altogether, the child taking occasional doses o infusion of senna, the drops being continued. He went on very well, and was nearly cured

but, on the 23rd of January, he returned with a fresh attack of inflammation affecting the conjunctiva of the lid and ball, this retarded the curative progress of the ulcer. The inflammation was treated by cupping, tartarised antimony, purging, and the stimulus of the weak nitrate of silver drops, which speedily removed it.

WESTMINSTER HOSPITAL.

Noli me tangere.

Samuel Waller, æt. 19, a native of Mitcham, was admitted, under Mr. Lynn, into John's Ward, Jan. 15, 1833. Is a lad of a strumous habit of body, pale, and thin: a linen-draper by trade. He left Mitcham about three years ago to live in London; previous to that, he says, nothing ailed him; since then, whenever he caught cold, the glands in the neck would enlarge; there are two cicatrices under the chin, namely, of scrofulous disease. The disease for which he was admitted commenced on the alæ nasi, spreading thence to the lip and part of the cheek. There is a thick yellowish encrustation on the right side, involving that side of the upper lip, the right ala nasi, part of the cheek, and part of the integument near the ear, the latter being a separate and distinct crust. This is surrounded by an areola of inflammation, and the whole of the integuments around are swelled and enlarged; the right naris is nearly obliterated, being very much contracted. On the sole of the right foot there is a similar encrustation, attended with inflammation, and it is the only part which is painful. He has been in the habit of attending Mr. Lynn, at Chatham, previous to coming to the hospital, and has had aperient medicines prescribed for him. The course which the disease takes is as follows:—vesicles, containing a yellowish fluid, make their appearance, burst, and then a crust forms.

Flour is ordered to be applied to the part, and he is to have Lynn's pills * to keep his bowels regular.

27th. Mr. White saw the patient to-day, and observed, that if the case was his, he would remove the crusts by emollients, and then apply leeches freely. The disease continues much the same as at last report.

Feb. 1st. The inflammation and swelling seem lessened.

20th. The disease, if anything, is on the increase; has been sometimes better, sometimes worse. Mr. Lynn says, that John Hunter considered the lixivium kali (the liquor potassæ) not unfrequently useful in such cases. He accordingly directed its exhibition, and the pills to be continued.

℞. Extr. colo. comp. } āā ℥j.
Pil. aloes c. myrrh. }
Hyd. submur. . . ℥ ss.

Fiat massa; divide ℥ij. in pil. xxiv.—A very excellent aperient pill, in great repute in Westminster.—Rep.

℞. Liq. potassæ, ℥j.; aquæ puræ, ℔ss.—Capiat coch. ampl. bis in die.

28th. Is rather improved; the tumefaction is not so great; the encrustation is peeling off in parts, leaving a reddish, but apparently sound integument beneath.

March 25th. Has been taking five minims of the liquor potassæ three times a day, for the last month, with occasional benefit. Ordered by Mr. Lynn to have ℥ss. ter in die.

April 2nd. The disease continues to get worse. Mr. Lynn ordered the ung. æruginis to be applied to the parts, and the lixivium to be omitted.

4th. All the crusts have been removed by the ung. æruginis; the parts diseased appear to be an ulcerated sore, of a pale red colour, unattended by any purulent secretion of any consequence. App. ung. sequens faciei,

℞. Ung. æruginis, ℥j.—Adipis, ℥iij.—Ft. ung.

6th. The whole surface of the sore is somewhat improved in appearance; very little pain caused by the application.

12th. Face improving; but the ulceration on the nose appears stationary; bowels not regular. To have Lynn's pills occasionally.

20. The disease is again stopping. Ordered a solution of the arg. nit. gr. ij. ad ℥j., and the ointment to be applied over that.

May 10th. Face and lip improving.

28th. Nearly well. Cont.

June 4th. The right ala nasi having been nearly destroyed, and the cavity almost closed, a sponge tent was ordered to be used to dilate it. This plan was pursued for some time with material benefit; dilatation took place, but not to the full extent, and he was discharged with directions to follow up the use of the sponge tent until it was no longer necessary.

Paralysis of the Upper Extremities, dependent on Spinal Disease—Nearly Impassable Stricture—Death.

Henry Reed, ætat. 60, was admitted, July 29th, 1834, into Mark's Ward, under Mr. W. B. Lynn. Is a man rather above the middle size, and much emaciated; resides in Lambeth. About two years ago he met with an accident, to which he attributes the supervention of the present complaint; he fell down a hole, seventeen feet deep, striking against the crown of the head, the back of the neck, and shoulders. He suffered considerably from the effects of the injury he received, and for which he was admitted an in-patient in St. George's Hospital, and afterwards attended it for some time as an out-patient. He considers that he had full command over his limbs until within the last few months, but paralysis came on so gradually that it is impossible to fix the date when it commenced. The arms and legs are paralytic, but the upper extremities are much worse than the lower ones, and the left arm is more affected than the right. He thinks that he has been gaining power in the lower limbs lately. The arms hang nearly useless, not

being able to raise the right arm more than an inch or two; has no power of grasping any object, even in the slightest degree; the sensibility of the extremities perfect, their muscular action only being paralysed; does not labour under difficulty of breathing or oppression at the chest, nor does he suffer from head-ach. On examination of the spine of the neck, there was found to be considerable projection of the fifth, sixth, and seventh cervical vertebræ, but he did not feel pain on pressure being applied to any part of the spinal column.

He is also labouring under a stricture, which he has had for seven or eight-and-twenty years; he says it is now in a very bad condition, scarcely allowing the urine to pass, save by drops, and he fully believes nothing can cure it, he has been under the hands of medical men so long and so often for it. The bowels are generally confined, but at present open by medicine.

Was ordered to be cupped on the nape of the neck to twelve ounces, and a blister to be applied afterwards. Rest and purgatives.

August 1st. He thinks he can raise the right arm better, but it is of course too soon to expect benefit. A No. 3 bougie has been passed down to the stricture, and secured *in situ*. The stricture is within three inches of the orifice.

This was withdrawn altogether on the 3rd, as he said he could not bear it in the passage; the occasional passage of the instrument was therefore the only thing to have recourse to.

5. Has considerably more power of moving the right arm, and feels a tingling in it; the left seems improving, Blister kept open.

14. Can now extend the right index; the blister causes considerable irritation.

16. Makes water a little better and with less pain.

25. Passes his water in a stream, although small, and he continues to improve in every respect. Can elevate either arm, and has some little power of grasping.

27. Was doing well until late last evening, when a sudden change unexpectedly took place, without any assignable cause, and he died this afternoon.

His friends refused to allow the body to be examined.

Aneurism of the Arch of the Aorta.

On Friday, the 26th of September, an examination was made of the body of a man who died the previous day.

He was about 54 years of age; had been in the hospital about two months previous to his death; admitted for a twofold reason, to wit, affording him a comfortable asylum, and also for the sake of the autopsy. He had been in better circumstances, and was latterly a schoolmaster in Guernsey.

His complaint was a tumour, situated on the left side of the first bone of the sternum, apparently rising out of the thorax, and pushing forwards the sternal extremity of the left clavicle. It possessed evident pulsation, synchronous with the heart's action, but the bellows'-sound could be only partially heard, and that in the lower part. The sufferer had great difficulty in breathing and swallowing, the trachea being pressed completely to the right side. The poor fellow being very much exhausted, we did not feel inclined to trouble him with questions. A short time before his death, partial paralysis of the right arm took place.

The external appearances presented by the body were emaciation, but not to any great extent, and the tumour, which had not diminished much in volume. The body was then opened, and the contents of the thorax and abdomen removed with the tumour, preparatory to a more careful examination of the parts, which was to take place in the course of that day. The aorta and iliacs were included in this abstraction. On cutting into the cavities of the thorax, the pleuræ were found to contain a large quantity of serum, and the lungs were gorged with fluid; there were marks of extensive chronic inflammation in the chest. The liver and spleen were large, and on the upper part of the latter was seated an encysted tumour, of the size of a moderate orange, containing sheets of a membranous substance, totally devoid of vascularity. It was considered to be an interesting and rare specimen of disease; it will be placed in the hospital museum. The tumour was examined the next day, after a very careful dissection, and was found to arise from the arch of the aorta, the left subclavian, carotid, and innominata being totally unaffected. A speck of commencing disease was found low down in the abdominal aorta.

APOTHECARIES' HALL.

NAMES of those gentlemen to whom the Court of Examiners granted Certificates of Qualification, Thursday, Sept. 25th.

Charles Anderton	Wigan.
Charles B. Dashwood	Beccles.
James Gilbert	London.
John F. Hemingway	Bradford.
Joseph John Horton	Birmingham.
Frederick Longden	Sheffield.
Nicholas Miskin	Stoke, Kent.
Thomas Pearce	Wallsall.
Edward H. Rudderforth	Halesworth.
Arthur Skelton	———
Arthur H. Talmadge	Durham.
Edward Watson	Manchester.
Samuel Waldegrave	Milton Haven.

MISCELLANY OF FACTS.

MR. EDGAR ASHE SPILSBURY, Surgeon of Wallsall, in a letter to a local newspaper, says that in all cases of cholera, except the apoplectic stertor of death, he has dashed a bucket or two of cold water on the naked body, with

the best effect. In many severe cases he has wholly relied on its efficacy, without administering an atom of medicine, and he adds, "if I am seized with cholera to-morrow, such is my impression of its value, I should trust to it alone." He narrates the following case. "— Oliver, a washerwoman, aged 70, seized at nine o'clock, P.M. with severe vomiting, bilious evacuations ran from her involuntarily, pain of the lower bowel, from her cries, intense; I saw her within an hour of seizure. A large flannel dipped in cold water was liberally applied over the whole skin; she was instantaneously relieved from all her symptoms, save a lightness of head; was free from complaint the next morning, and had no return; she perspired profusely under the blankets."

A schism has arisen among the subscribers to the fund for erecting a General Hospital at Cheltenham, in consequence of which the committee have resigned. The disagreement arises out of the allegation that Messrs. Paul, who are appointed the architects, *canvassed* for the appointment, contrary to the resolution entered into by the committee.—*Worcester Journal.*

The Assistant Surgeons on the Army Medical Staff of Ireland are now reduced to four, viz. Dartnell, Dublin; Renny, Cork; Hopkins, Limerick; and Ewing, Limerick. The number of Deputy Purveyors is only two, J. Croft at Cork, and W. Ivey at Dublin; and there are also only two apothecaries, H. O'Hara, M.D., at Dublin, and W. Wheadon at Cork.

College of Physicians.—The annual appointment of officers took place on Wednesday last, when Sir H. Halford, Bart., was re-elected President, Dr. Cholmeley, Dr. Royton, Dr. Roget, and Dr. Roots, were elected Censors, Dr. Turner, Treasurer, and Dr. Francis Hawkins, Registrar.

APPOINTMENTS IN THE NAVY.

Assistant-Surgeons.—J. Robertson, to the Raven; H. H. Hammond, to the Medea; J. Morrison, to the Buzzard; James Solomon, to the Columbine.

BOOK FOR REVIEW.

Observations on the Preservation of Hearing, and on the Choice, Use, and Abuse of Hearing Trumpets. By John Harrison Curtis, Esq. London: Renshaw, 356, Strand.

This, to a non-medical reader, is an interesting little work.

CORRESPONDENTS.

Dr. Bostock's communication received. Its contents will probably be adverted to in our next number.

The Weymouth and Dorchester Medico-Chirurgical Book Society.—The Reports are interesting only to its members. The arrangements are good; and we beg to express our gratification at finding so much unanimity prevailing. It reflects great credit on every one of the members. Any original or interesting scientific communications would be gladly inserted in this Journal.

Chirurgicus.—His suggestion, he will observe, has been already considered. Good lectures will be henceforth inserted *in full*, and bad ones, of whatever length, excluded entirely.

Mr. Brooke.—His communication next week.

Mr. Bainbridge.—The continuation of his Essay is unavoidably postponed until next week.

Mr. Dear.—We are much obliged to him for his suggestions—they shall be attended to as soon as possible.

METEOROLOGICAL JOURNAL.

MONTH. Sept., 1834.	Moon.	Thermom.			Barometer.		De Luc's Hygrometer.		Winds.		Atmospheric Variations.		
25	☾	58	62	57	29·90	29·93	72	70	N.E.	E.	Fine	Fine	Fine
26		59	65	59	29·89	29·82	70	72	S.E.	S.E.	Cloudy	——	Cloudy
27		63	66	50	29·70	29·75	75	76	S.	W.S.W.	Rain	Cloudy	Fine
28		54	60	53	29·83	29·90	78	79	N.W.	N.N.W.	Fine	Fine	——
29		56	64	49	30.07	30·00	78	76	N.	E.	——	——	——
30		57	62	49	29·97	29·94	75	74	E.	E.	——	——	——
Oct. 1		56	61	46	29·96	29·92	73	74	E.	E.	——	——	——

The quantity of Rain fallen in September was 1 inch.

50, *High Holborn.* William Harris and Co.

All Communications and Books for Review to be forwarded (free of expense) to the Publisher, 356, Strand, near King's College.

THE

London Medical and Surgical Journal.

No. 141. SATURDAY, OCTOBER 11, 1834. Vol. VI.

LECTURES ON THE THEORY AND PRACTICE OF MEDICINE,

BY WILLIAM STOKES, M.D.,

Delivered at the Medical School, Park Street, Dublin.—Session 1833–34.

LECTURE XXXVI.

General Considerations on Fever—Erroneous Modes of Investigation—Importance of the Labours of the French Pathologists—Complication of Fever with Local Disease—Primary and Secondary Fevers—Relations of Primary and Secondary Fevers to Local Changes—Tendency to Spontaneous Termination—Principles of Treatment—Errors of Brown and Broussais—Researches of Gaspard and Magendie—Importance of the Knowledge of Secondary Lesions—Effect in preventing Crisis—Humoralism and Solidism.

Gentlemen,—It may be safely asserted, that, in the whole range of medical science, there is no subject on which so much has been written and so little known as fever. You will find, in the writings attributed to Hippocrates, a series of observations on the rise, progress, and termination of febrile affections, which it must be acknowledged are characterised by singular beauty and truth; and I think I may venture to say, that such is their extreme accuracy, such the comprehensiveness, acumen, and power of the master mind that made them, that scarcely a single one has been overturned by the researches of modern times. From the period of Hippocrates almost down to the present day, the contributions to this department of medicine, though numerous and varied, were of very inconsiderable importance; they effected little towards the improvement of our knowledge of fever, and many of them were calculated rather to puzzle and mislead, than to throw light upon what was difficult and obscure. In place of studying the phenomena and effects of fever, instead of applying themselves to what was tangible and useful, the minds of medical men were occupied in tedious but profitless attempts to discover the proximate cause of fever, and it was to this subject that the labours of some of the greatest men in medicine were exclusively directed for a series of years. The consequence of this was, that our knowledge made no real progress, and as little was known about fever in the time of Cullen and Brown as in that of Hippocrates. We had innumerable discussions as to its cause and nature, we had a vast quantity of learned writing and ingenious speculation, but they produced nothing available for practicable purposes, nothing tangible or real. The investigators failed, because they reversed the Baconian method of arriving at the truth; they first built up a theory, and then thought to make the phenomena of nature square with it; they forgot that, to be truly philosophical, we must first collect, compare, and arrange facts; and, when we have done this, we may deduce from them a theory, cautiously, and with a strict regard to truth. They did not pursue this course, and the consequence is that they added nothing to the sum of our available knowledge. Their disciples knew nothing more than was known to Hippocrates; in fact, they knew less, for their notions on the subject of fever had reached them through an erroneous and distorted medium. The followers of Cullen viewed it through the theories of Cullen, the Brownists through those of Brown; both alike forgot nature, and both were consequently inferior to Hippocrates in true knowledge. They attempted to discover the proximate cause of fever, and they failed, as men generally do, when they attempt to investigate first causes. We know very little, indeed nothing, of the nature of first causes; they are, and will, in all probability, remain for ever beyond the range of human intellect. It may be argued, that Cullen and Brown did not seek to ascertain the first cause, but only the proximate cause of fever; but this is only a play upon words, both are shrouded in the same obscurity, and in both the same difficulty attends our investigations. Even suppose we say with Cullen, that fever is a spasm of the extreme vessels; or with Brown, that it is asthenia of the whole system, what do we learn by this, or of what use is our know-

ledge? Have we more defined and accurate notions of fever?—Certainly not. They failed, as all men do who occupy themselves in the fruitless labour of searching after first causes. There is but one First Cause, and even of Him we know nothing accurate, but what He has vouchsafed to reveal.

Modern pathologists have pursued a course very different from this, and the consequence has been that they have arrived at the most splendid results. Instead of attempting to investigate proximate causes, they have studied the *phenomena and effects of fever*, they have examined dead bodies, they have accurately appreciated the series of pathological changes they present, and endeavoured to connect those changes with the symptoms. In this great work the French pathologists took a prominent part; indeed, I think it may be asserted, without fear of contradiction, that a vast proportion of our improved knowledge on the subject of fever is due to the French. It has been, I regret to say, too much the fashion to decry the labours of the French pathologists; but I believe this has been chiefly done by persons who would gladly possess the knowledge they affect to despise. The French pathologists have pursued with respect to fever the same method they have so successfully employed in the investigation of other diseases; and though their researches have not thrown any important light on its proximate cause, they have taught us a vast deal as to its phenomena and complications, they have established a great number of valuable facts, and unfolded a series of beautiful truths; and, I need not say, that it is in the appreciation of these facts that a proper knowledge of fever consists.

In the first place, they have strongly drawn the attention of the medical world to this great truth, which should be engraven on your minds,—*that mere fever, without local disease, is of very rare occurrence.* Here was a new and extraordinary light thrown upon the misty doctrines of the older pathologists. With them fever was a nonentity, something they endeavoured to describe but could not, something apart from, and totally unconnected with, organic change. The result of this mode of viewing the question was a variety of crude hypotheses and fanciful speculations. Bear this always in mind,—mere fever, unaccompanied by local disease, is very rarely met with. Recollect, too, that it has been established beyond the possibility of doubt, *that fever, complicated with local disease, is the rule, and its non-complication the exception.* We have further learned from modern pathology, *that every system and every organ in the body may be, and frequently is, diseased during the course of fever, and that, in the vast majority of fatal cases, death is the result of one or many local inflammations.* We further learn, that the character and symptoms of fever are infinitely varied, and that the cause of this variation mainly depends on the seat, the number, and the nature of the local affections. It is to these that we are to attribute the principal modifications in the character and phenomena of fever, and it is by these that its course and termination are mainly influenced.

Dr. Fordyce, in his work on fever, attempts to give a definition of the disease, and as I feel convinced that it is, if not a definition, at least one of the best descriptions of fever, I shall give it as nearly as possible in his own words. The style of this description is quaint but expressive. "Fever," says he, "is a disease which affects the whole system; it affects the head, trunk, and extremities; it affects the circulation, absorption, and the nervous system; it affects the skin, fibres, muscles, and membranes; it affects the body, and it affects the mind; it is, therefore, a disease of the whole system in the fullest sense of the term. *It does not, however,*" says he, "*affect the various parts of the system uniformly and equally, but, on the contrary, sometimes one part is more affected than another.*" This last observation is totally at variance with the idea that fever is a mere morbid condition of the whole system without reference to local lesions, for he expressly states that it does not affect the whole system uniformly and equally. This excellent view of fever seems to be borne out completely by modern pathology, and particularly the last part, where he says, that in cases of fever one part is more affected than another. We have, for instance, cerebral fevers, nervous, bilious, gastric, and catarrhal fevers, by which, it is to be observed, we do not mean to imply that there is nothing more than simple disease of the brain, or nerves, or liver, or bowels, or respiratory system, but that in each of these fevers, disease predominates in some particular part. So that when we speak of these fevers, we speak of such a disease as Fordyce has described, in which one part of the body is affected more than the rest. In many of the schools you will still meet with Cullen's division into synocha, synochus, and typhus, a division by which we gain nothing at all, these terms being but mere words and no more. Will any one define what is meant by synocha, or synochus? Will any one say what is typhus? Will any one say that a particular class and character of symptoms and morbid changes apply to any of these affections? It would be quite impossible. What we generally find is, that in the different cases of what have been termed synocha, synochus, and typhus, though they may present the symptoms belonging to each separately, yet in these same cases, at some period or other, the symptoms pass into one another so as to confound the original distinction. We have synocha to day, synochus to-morrow, and then typhus; or we may have typhoid symptoms at first, and inflammatory ones afterwards, and so on. We find too, *that similar causes will produce in different individuals essentially different forms of fever,*

and hence it is that we cannot found any distinction of fevers on their exciting causes. Nothing is more common than to see in two patients the same lesion producing, in one the synocha, in the other the typhus of Cullen. Thus, whether we look to the progress, symptoms, or exciting causes of fever, we find that this division has no foundation in nature, and is purely scholastic. Synocha, synochus, and typhus, are but mere names without meaning, terms which belong to the dogmatism of theory, and not to the expression of truth, and yet it is dreadful to think of the numerous lives which have deen sacrificed at the shrine of this dogmatism.

Fevers may be divided into two classes. We have, in the first place, fevers which we may call primary or essential, in which we find (as far as human investigation can go) affection of the whole system, of the fluids as well as of the solids. This general state of the whole system seems in such fevers to have the initiative, constituting the first step in the process of disease; but it is also true, that, in almost every instance of essential fever, local disease springs up at some period or other of its course. We have, then, in these fevers this primary state of the system, the cause and nature of which are unknown, and we have this followed by various secondary lesions, affecting different parts of the body, and presenting characters by which we can arrive at a knowledge of their nature, more or less.

In the second class of fevers, we place all those in which the first affection is local, and the fever secondary. Observe the distinction between this and the former class. In the first kind, or primary, the local disease is consequent on the fever, in the secondary, fever is the result of local disease. Let us take an example of each. A person in health is exposed to the contagion of typhus; he becomes languid and weak, has troubled sleep, bad digestion, and low spirits; after some time what is called fever sets in, and during the course of this, various local diseases may supervene. In the other case, a person, also in health, from exposure to cold, or from some local injury, gets an attack of inflammation of the lungs, or some other local lesion, and, as a consequence of that lesion, has symptomatic fever.

Now the relation which the fever bears to the local symptoms in each of these cases is different. In the first case, the fever is primary, and the local affections secondary; and it may happen that, although the local diseases may be modified or removed, the fever will still continue; but in the second, the fever always vanishes on the removal of the local disease. We have to enter on the consideration of the first of these to-day, and to examine that morbid state of the whole system in which local disease supervenes at some period of the fever, in other words, where the lesions of particular parts or organs are symptomatic of the fever.

I have already mentioned, that one of the great truths at which modern pathologists have arrived is, that local disease commonly occurs during the course of fevers. It has also been established, that, in the great majority of cases, the cause of death is one or more local inflammations. The experience of every candid pathologist is in favour of this doctrine. Patients seem to die of fever, but the fact is that some die by the brain, some by the lungs, others by the digestive system, that is to say, during the course of fever, they get diseases of various organs, some of the brain, some of the lung, and a vast number of the digestive system, often sufficient to destroy life, if there was no fever at all. It is an undeniable fact, that, in the great majority of cases, there is local disease of some part or other of the body, and that a vast proportion of fever patients are carried off by local inflammation. How plain then is the deduction from these facts, that the man who neglects the viscera in fever is practising with his eyes shut.

So much for the first great fact of the complication of fever with local disease and its important bearing on practical medicine. But there is another general consideration with respect to these primary fevers, they have a tendency to terminate spontaneously; of the cause of this spontaneous termination we are still in ignorance. One of the most simple and familiar examples of this is the paroxysm of an intermittent. A patient, who is at present apparently in good health, will in the space of an hour or less be attacked with severe rigors, followed by all the symptoms of fever, a flushed countenance, hot skin, quick pulse, and high coloured urine, and in some time afterwards a copious perspiration breaks out, which is attended with complete relief to the symptoms, and the patient gets well again. From this time until the period of the next attack he continues to all appearance in health. Now, if we consider each of these paroxysms as an attack of fever, we see in them an evident disposition to terminate spontaneously. The same thing occurs in the case of the exanthemata. Scarlatina, measles, and small-pox, have a regular course, which generally terminates at stated periods; they also exhibit a succession of stages characterised by corresponding symptoms. We observe the same disposition to terminate spontaneously in most continued fevers, and it has been further remarked, that this spontaneous termination generally occurs on particular days. We have then two great leading facts in the history of all primary fevers, first, that they are most commonly complicated with local disease, and, in the next place, that they have a great tendency to terminate spontaneously and on particular days.

Now, gentlemen, you will please to observe, that a knowledge of these two very important facts furnishes us with two great indications, —one, to discover, and remove, or modify the local inflammations; the other, to support the

patient's strength, so that he may not become exhausted during the progress of the disease, and thus lose his chance of this spontaneous favourable termination. These two indications, though apparently incompatible, are not so in reality. You will of course understand, that the extent, to which we pursue one or other of these indications, must necessarily vary according to circumstances. The rapidity, violence, and particular seat of the local inflammation, the duration of the attack, the age, sex, and constitution of the individual, all these are circumstances which must be taken into account in adopting any plan of treatment, whether calculated to remove local disease, or support the patient's strength.

The similarity between the different individual cases of fever, is too faintly shadowed out to amount to anything like identity, in fact, there are no two cases of fever perfectly alike. You might as well expect to find two human beings exactly alike as to find two cases of fever perfectly similar. The causes of this remarkable variation are reducible to the extent, variety, seat, and complication of local disease, and to the peculiarities of the patient's constitution. These two classes of circumstances produce infinite varieties in the appearance and character of fevers.

The followers of Brown saw nothing in fever but debility, and their practice was to support the strength, and give stimulants from the commencement, ignorant of the fact, that neglected local inflammation will produce and keep up debility. The followers of M. Broussais, on the other hand, think that fever is sympathetic, that it depends on local inflammation, and that it must be subdued by depletion. Truth lies between. We must do both, we must combat the local inflammations by antiphlogistic means, and we must support the patient's strength by a well regulated regimen. These two indications are by no means incompatible, but their application must vary according to circumstances. If it be true, then, that local disease is very common in fever, and a frequent cause of death, it is plain that to practise without a knowledge of the state of the viscera, would be acting like the physician mentioned by D'Alembert. He compares him to a blind man armed with a club, who comes to interfere between nature and disease. If he strikes the disease, he kills the disease, if he strikes nature, he kills nature.

A discussion has arisen in modern times, as to whether we should look upon all fevers as sympathetic. This is one of the leading doctrines of the school of M. Broussais. He declares that all fevers are sympathetic, that there is no such thing as an essential fever, or, in other words, that there never exists that peculiar morbid state of the *whole system* to which we apply the term fever; that in all cases fever is the result of local lesions, and that on the removal of these lesions its cure will depend. To this conclusion the school of M. Broussais were compelled to come in consequence of their exclusive solidism. They endeavour to reduce all the phenomena of life, whether in a state of health or disease, to the mutual action and influence of the viscera and solid parts on each other. They are solidists, in the strict sense of the word, and can have no conception of fever as existing independently of some primary local lesion. But it seems that the leading points of this doctrine have not been able to stand the test of an impartial examination, and may at present be looked upon as disproved. You will see at once the importance of this, when you consider that if it be true, that all fevers are sympathetic, the practice must necessarily consist in the discovery and removal of local lesions, and no more. But I said that these doctrines are now disproved, and the following arguments may be laid before you in proof of this statement.

In the first place, let us inquire whether any cause acting on the whole economy is capable of producing local disease. Mark, gentlemen, the object of our inquiry is to ascertain whether any cause operating on the whole economy is capable of producing local disease. Now, I believe it is quite certain that such is the fact, and that we may have, first, a morbid condition of the whole system, and, consequent on this, various local lesions. Several continental pathologists, but in particular MM. Gaspard and Magendie, have shown, by repeated experiments, that we can produce all the phenomena of typhus in the lower animals, by introducing putrid substances into the system. These gentlemen injected putrid substances into the veins of animals, and applied them to the surfaces of wounds, and, in every case where these experiments were performed, they observed that the animals became ill, had languor, loss of appetite, thirst, prostration—in fact, all the symptoms of bad typhus; *and, in case of death, that they exhibited, on dissection, local lesions corresponding with those we meet with in the human subject in fever.* Now, observe, these animals were, previous to the experiment, in a state of perfect health: they are, then, subjected to the operation of a cause which is found to produce a morbid state of the whole system; they die, and, on dissection, inflammation and ulceration of the mucous membrane of the digestive tube, and other lesions, are discovered in almost every instance. It would be quite absurd to say here, that the ulceration of the bowels was the cause of the morbid symptoms, for the animals were, previously, healthy. We can come to no conclusion, then, but that the introduction of putrid matter produced that morbid state of the whole system which is termed *fever*, and that the local inflammation was the result of this state. It is the same thing with respect to the exanthemata. A child is exposed to the contagion of small-pox; for some time nothing particular is observed; he then gets ill and feverish, and

this is followed by an eruption of variolous pustules. Here we have a local disease consequent upon a circumstance affecting the whole system, and in this, as in the former examples, the local lesion is secondary. We might as well argue that the pustules were the cause of the symptoms in one case, as to say that the ulceration of the intestines was the cause of the other. Every one, I think, will admit that the pustular eruption in a case of small-pox is secondary, and not the cause of the symptoms; and the same argument will apply to the secondary affections of typhus. If it be true, as appears by M. Magendie's cases, that fever follows the introduction of putrid substances into the body, and that this morbid state of the system produces inflammation of the intestinal mucous membrane; if, too, we admit that in small-pox the pustules are secondary, and consequent on a morbid state of the whole system originating in contagion, the same argument will hold good in all cases of local inflammation (whether of the liver, lungs, brain, or any other organ), which may arise during the progress of fever. These facts are adduced in support of the first part of the argument—that local lesions may be and are consequent on that morbid state of the whole system to which the name of fever is applied.

The next thing to be observed with reference to this question is, that if it be true that typhus is merely symptomatic of local disease, it would then follow, *that there should be as constant a relation between the symptoms during life and the morbid changes seen on dissection*, as there is between the fever of pneumonia and the changes presented by the lung. But this is not at all the case, for we find that there is no constancy, no uniformity, either in the seat or extent of the local disease. Two patients will exhibit symptoms of typhus not differing in any material point, and yet, on dissection, you will find little or no traces of disease in the intestinal canal of one, in the other, you will find in the same parts a vast amount of disease. Two others will also present symptoms very similar; in the one you will find the lung healthy and normal, in the other, you will find it extensively disorganised. Would it not be absurd to assert here, that the fever was symptomatic of the local lesion, seeing that there is no constant relation between the symptoms and the morbid changes, either as to situation or extent? Again; it is a fact, that you may have several patients presenting different symptoms, and yet, when you come to examine their bodies, you find the same morbid changes in all. One may exhibit all the phenomena of typhus; in another, this condition is but slightly marked; in a third, it is absent; and yet, on dissection, you find a similarity of local lesion. Lastly, it may be urged, that if typhus were symptomatic of any particular local lesion, we should be able to cure it by removing that local lesion. This, however, is not always the case; that it sometimes does occur I am willing to admit, and this is therefore to be considered as the weakest of my arguments. But, on the other hand, if it be admitted that the local lesions are accidental and secondary, we can easily understand why their removal should necessarily cause the removal of the fever. Such are the arguments on which I ground my objections to the doctrine—that all fevers are merely symptomatic of local disease; and in these views I think I am borne out by the opinions of the soundest modern pathologists.

But though we admit that local inflammations are secondary, and bear the same relation to typhus as the eruption of small-pox to the morbid state that precedes it, still they are not the less important; and it is by a careful study of them that we arrive at a key to correct and successful treatment. They are of great importance from being exceedingly common in fever, in fact, so common, that their occurrence is the rule, their absence the exception. They are also, in the majority of cases, the cause of death, and this they bring about in two different ways. First, directly, as in a case of simple inflammation. A patient in fever, who gets an attack of violent enteritis, may die of it as well as if he got an attack of primary enteritis; or he may die of pneumonia coming on during the course of his fever as well as the man who dies of pneumonia from cold. Thus we see that the secondary inflammations may produce death directly. They may also produce it indirectly, by preventing the efforts of nature towards a favourable termination. You recollect I told you, that in fevers there is a strong tendency to terminate spontaneously and on particular days. Now, we find that this disposition is greatly impeded by the presence of local inflammation, so that local inflammation may operate to the destruction of life in two ways, either directly by its intensity and extent, or indirectly, by preventing a critical termination.

This leads us to look still deeper into the matter. We find that these local, or secondary, affections may also produce a train of sympathetic phenomena of a very remarkable character. There is no reason why enteritis, coming on during the course of a fever, may not re-act on the economy as well as the enteritis from cold, which we know generally produces symptomatic fever. In the case of two patients, one, for instance, meets with some lesion of the intestinal mucous membrane, and, as a consequence, gets enteritis and sympathetic fever; another gets enteritis during the course of a typhus; in the one case, the local lesion plainly re-acts on the system, in the other this is less apparent, but there is no reason to suppose that it does not produce some effect on the system in one case as well as in the other. The law appears to be this, that, in almost all cases of fever, there is a combination of the essential and the sym-

pathetic fevers, the essential the result of the first cause, and the sympathetic the result of the local lesions, which arise during its course. Indeed, nothing seems to be better established than that local disease re-acts on the system and prevents a critical termination. You will get a very good idea of this by considering the paroxysm of an intermittent. What are the periods in which an intermittent is most liable to terminate favourably? The earlier ones. What are the periods in which a favourable termination is least likely to happen? The later ones. Now what are the periods in which there is little or no accompanying organic lesion? The first or earlier. What are those in which there is more or less of organic change? The later, in which we generally find, on making a careful examination, that disease of some organ, or organs, has taken place, and is presenting an obstacle to a favourable termination. It is the same thing with respect to fever.

In the treatment of fever, it is a most important rule to investigate the condition of the viscera, and remove, if possible, any existing local inflammation, By this we accomplish a double purpose ; we prevent the direct danger of death from the violence of local disease, and we obviate the inconveniences arising from sympathetic irritation. We give nature fair play, we reduce the case to a state of the greatest simplicity, we prevent the liability to new local affections, and we thus effect a great deal towards a favourable termination. It is an interesting and singular fact, and one dwelt on by the school of Broussais, that, in many cases of fever, the removal of the local inflammations is speedily followed by a subsidence of the fever. It is chiefly from this fact that they argue in favour of the opinion, that all fevers are symptomatic of local disease. This argument, however, as I have already proved, is more specious than solid. The true reason is, that by removing local disease we remove the barrier which opposes the salutary operations of nature. Every attempt at a favourable termination is impeded by the co-existence of local disease, and the more intense and extensive this is the greater is the obstruction. You are not by any means to conclude, that a fever is symptomatic because it disappears on the removal of local disease; the true explanation is, that by subduing the local inflammation you have removed a focus of irritation, and given scope to the preservative powers of nature.

These, gentlemen, I believe most firmly to be the true principles which should guide us in considering the subject of fever. They have been obtained by careful and accurate deduction, and are based on a numerous series of well conducted experiments. Weigh the matter calmly, and I think you will be disposed to agree with me, that fever in its origin implies no tangible condition of the system, and that we know it only as consisting of a group of phenomena, varying as to their cause, seat, effect, and duration. The humoralists erred by fixing its seat in the fluids, the solidists by limiting its locality to the solids. We recognise no distinction between the fluids and solids, so far as fever is concerned, they all form parts of the great whole, one cannot act without the other, but their mutual reaction is extensive and various. From these considerations we deduce the important rule, that there is no mode of treatment universally applicable, and the man who treats fever with wine and stimulants only, or he who contents himself with purgatives and diaphoretics, or he who limits his practice to leeches and the lancet, that man knows nothing of fever. Though his hair be grey and his authority high, he is but a child in knowledge, and his reputation an error. On a level with the child so far as a correct appreciation of the great truths of medicine is concerned, he is very different in other respects, his powers of doing mischief are greater, he is far more dangerous. Oh ! that men would stoop to learn, or at least cease to destroy !

LECTURES

ON

MIDWIFERY & THE DISEASES OF WOMEN AND CHILDREN,

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LECTURE II.

Menstruation—Amenorrhœa.

Gentlemen,—At the time when the body of a female of a sound and healthy constitution comes to a certain growth, there is generally more blood generated than can be contained within the vessels, whence it is poured out at the extremities of the uterine arteries, and obtains the name of menstrual flux. This is the aphorism of the celebrated Boerhaave upon this important function, a function which is in activity during only a portion of a woman's life, and even then but at intervals.

" A monthly discharge (says Mr. Abernethy) takes place from the uterine cavity; it is of a nutritious quality, resembling blood, and, from its quantity, languor and weakness are induced whenever it occurs. Why nature should have doomed the human female to the periodical loss of so much nutriment and proportionate power is a problem that can only, in my opinion, be solved by supposing that it relieves uterine irritation, and mitigates the extreme of sexual desire, thus enabling her to conform to the laws of morality and the social compacts which are established between us." The first appearance of this discharge is accompanied by a remarkable train of changes, both in the physical as well as in the moral

constitution of a young female; she loses the childish playfulness of a girl for the retiring modesty of a young woman; the expression of her eyes, the face, the very movements of her body are altered; amusements, which before had been her delight, now afford her but little pleasure; her tastes are changed; she usually takes at this time a rapid start in her growth, her limbs becomes more rounded and fully formed, her breasts more developed; she is no longer a child, she has become a woman, has woman's feelings, and is now capable of impregnation.

The varieties to which this function is subject are almost endless; in some females it will make its first appearance as early as the tenth year, in others not till after the twentieth, in some it will cease at the age of forty, while in others it will continue to appear regularly till beyond fifty; in one woman it will appear every three weeks, or even oftener, in another only once in six weeks; the duration of the discharge in one case will be but two days, whereas in another it will exceed ten days; one woman will lose one or two ounces, while others will discharge at least a pound, or even more, and yet all these varieties are seen within the limits of health. These varieties depend in a great measure upon climate; in hot countries the menses appear earlier and are much more profuse, they also disappear much earlier, whereas in the cold northern regions of Lapland it takes place but two or three times in the year, chiefly during the summer, and then in small quantity; thus we find that a negress girl is already the mother of two or more children before her European sister has begun to menstruate; on the other hand she ceases to have children at a much earlier age, and becomes an old woman much sooner.

In this climate the menses usually appear about the fourteenth year, and cease by the forty-fifth; the discharge returns every four weeks, lasting from three to six days, the quantity varying from five to eight ounces. Constitution and mode of life have also a considerable effect upon this secretion; the delicate luxurious female of rank, accustomed to late hours, little exercise, rich food, and a bed of the softest down, menstruates much more profusely and for a longer period than the hardy robust peasant girl. Cases have been recorded of an extraordinary early appearance of the menses, viz. in children shortly after birth, or at a very early age, where the breasts and external parts of generation were as fully developed as in a girl of eighteen; other cases have been recorded of women continuing to menstruate to a very advanced period of life. That this discharge is a secretion from the uterine arteries, the capillary extremities of which open into the cavity of the uterus, has been repeatedly proved by examining the uterus of a woman who has died during menstruation, and also in cases of inversion of the uterus, where the discharge has been distinctly perceived oozing from the minute orifices in the lining membrane of the uterus. It appears, also, evidently intended to act as a periodical evacuation to the system, because where this discharge has been suppressed, much derangement of health is the result, the leading symptoms of which are generally those of congestion to the head, and not unfrequently we observe nature to make a periodical attempt to relieve herself by a discharge of bloody fluid from the eyes, ears, nostrils, gums, œsophagus, stomach, intestines, bladder, breasts, skin, &c., and also through wounds and ulcers; in such cases the discharge has all the characters of the menstrual fluid, and will return as regularly as the menstruation which has come from the uterus.

Menstruation, on account of the remote effects which it has on the female system, is a function of the highest importance; such is its connexion with the rest of the system, that there is no function which may not become deranged when it is suppressed, or scarcely any disease which may not be the result. The running to heat of animals is very different to menstruation; in them the discharge proceeds chiefly from the vagina, whereas in man it comes from the uterus; instead of the venereal passion being excited by this condition of the female, as is the case with animals, the human male feels a repugnance towards a woman who is menstruating; this explains the prevalence of the belief which has existed in every country from the earliest times, viz. that a woman is unclean during menstruation; hence the superstitious notions that her near approach is injurious to every living thing, that the silk worms will die, that the fruit blossoms will not set, the corn will be spoiled, the beer will not ferment, and the milk become sour; that these notions are not the result of refinement in manners and civilisation, but are rather to be attributed to instinct, is proved from the fact, that in the most uncivilised and dirty nations, viz. the Hottentots and Negroes, &c., the women are obliged to leave the community when about to menstruate, and pass this period in solitude.

Menstruation is a function peculiar to the human female, and the capability of walking would appear to contribute somewhat to produce this discharge; for we find that those apes whose movements nearly resemble those of man, have a much greater discharge during the period of their running to heat than any other animal. On account of the uterus in animals being neither so thick, so spongy, or so vascular (from which reason they do not menstruate), they are neither liable to such hæmorrhages when the placenta is detached, nor to such frequent premature expulsion of the ovum as the human female*.

For a considerable period before puberty—often two or three years—symptoms of the approaching important change in the system may be detected. It is not at all uncommon

* Burdach.

to meet, at this stage, with very obstinate disorders, such as headach, epileptic fits, or cutaneous affections; and, upon finding the usual plans of treatment fail, medical men are in the habit of prophesying a cure when menstruation is established. This arises from long experience of the truth of such a result. As the time draws near, the system becomes more irritable; there is a general uneasiness and alteration of the moral character. There is also very commonly much languor, flushing, sensation of fulness, headach, livid marks round the eyes, disordered appetite, impaired digestion, and disturbed or unnaturally heavy sleep; these symptoms continue for a longer or a shorter period, and, immediately preceding the first appearance of the discharge, there is much pain and weight, with fulness in the head and pelvis, and throbbing and swelling of the mammæ. Although the actual discharge is rarely quite regular to the month for the first half year or so, yet the usual constitutional symptoms just enumerated as directly preceding the discharge, are found to observe the lunar intervals, and to be aggravated monthly, even for some time before the flow of the menstrual evacuation itself; with many the symptoms above mentioned are either so slight or so temporary that no great attention is paid to them.

Where medical aid is required, the plan of treatment must depend a great deal upon circumstances. As a general rule, it is best to temporise, knowing that a little patience will carry the patient to the termination of the discomfort; should there be any great disturbance, with a full pulse and much headach, the abstraction of a small quantity of blood will be prudent; the diet should be carefully regulated, and abstinence from meat and wine strictly enjoined; the bowels should be kept rather more open than usual, but not with any of the more irritating and drastic purgatives, under the idea of exciting the uterus to action, as is too commonly recommended, the object being to lead the patient through the struggle without any force or disturbance. We should watch excess of action of every description and restrain it, but not attempt to stimulate any apparent deficiency, unless actual disorder of health be manifested; circumstances may arise, however, to call for more decisive measures, and the menstruation may be so protracted, as to constitute one of the forms of amenorrhœa *, the nature and treatment of which I shall now proceed to consider.

Amenorrhœa.

Under this head I shall consider two species of deranged menstruation, first, where the menses do not appear at the usual age, viz. *retention of the menses*, and secondly, where they have appeared, but from some cause or other have been interrupted, viz. *suppression of the menses*. Retention of the menses may occur under two forms, first, where the changes of development connected with puberty have been delayed, and, secondly, where these changes have taken place at the usual period, but without the appearance of this discharge.

The age at which puberty takes place, occasionally varies considerably. Numerous cases have been recorded of an unusually early development of the genital organs, and consequent early menstruation; instances, however, of the other extreme, viz. where menstruation does not appear till several years after the usual period, are much more frequently observed. This form of tardy menstruation does not necessarily imply a state of disease, and differs essentially from the other species where puberty has been established without the menses making their appearance; "in the former, puberty itself is delayed, whether from idiosyncrasy, from want of constitutional energy, or from defective organisation; in the latter, puberty exists, the ovaria and the uterus are organically matured, but their peculiar function is suspended *." Where puberty has been delayed from torpor of the system, we meet with young women of eighteen or twenty years, resembling children in conformation, with a weak and languid frame, a feeble circulation, attenuated, colourless, and of a stinted growth; the case is obviously one of constitutional debility, and only as such requires medical treatment; should the general powers be renovated by time, or the judicious employment of tonics, a nourishing diet, salubrious air, and well regulated exercise, the menstrual discharge will either take place with the other signs of puberty, or the case will belong to the other form presently to be noticed. But puberty may also be delayed with another condition of the body. When the general health and strength continue unimpaired, the growth proceeds as rapidly as in others, the circulation is active and the frame vigorous, but there are no protuberant mammæ, no sexual propensities, a slight beard grows on the upper lip, and the general characteristics resemble those of a male; in such a case, the probability is that the ovaries are either entirely absent, or have become so diseased that their functions are entirely lost †.

Where most of these changes which are characteristic of puberty, have taken place without the appearance of the menses, an effort seems to be made by the constitution for bringing on the discharge. This condition is manifested by a variety of symptoms, all indicative more or less of a state of plethora; headach with a sensation of fulness and throbbing, a flushed countenance, heaviness, pain in the back and limbs, and a full pulse, generally remarkably slow, though in others accelerated; the feet and hands are cold, or occasionally burn with heat; the skin is either

* Locock, Cyclopædia of Practical Medicine.

* Locock, op. cit. † Locock, op. cit.

dry and rough, or moist and clammy; our plan of treatment will be, therefore, to relieve the loaded state of the circulation, and equalise its action over the whole system. General bleeding is seldom necessary; leeches to the labia, groins, or os uteri, where the pain of head and back is severe, will usually be sufficient. The bowels should be well emptied by a brisk purgative, for which purpose those medicines should be selected which both stimulate the lower bowels and increase the secretions of the whole canal. This end is best answered by colocynth, aloes, or jalap, with calomel, at night, followed by a dose of salts and senna the next morning. A warm foot bath, and, where the circulation is very torpid, made stronger by the addition of mustard flour, should be used night and morning, and this plan persisted in until the symptoms of plethora are removed, and the bowels restored to a more healthy action. To equalise the circulation more effectually, early hours and active exercise are of great importance; exercise on horseback, which has been so much recommended in these cases, in my opinion, is not so desirable as has been supposed, for it does not promote the circulation in the lower extremities to that degree which is requisite. "It is usually (says Dr. Parry) a mere apology for the want of that exercise, which providence evidently intended that man should take by means of his *own* limbs, and not those of another. Many persons, indeed, assert their inability to walk to any extent, or to employ any other active exertion; it heats, it fatigues, it pains them, it produces a thousand real or imaginary inconveniences, whereas the exercise of riding is in no degree fatiguing, and, therefore, must be infinitely more beneficial*."

It is frequently a source of no little controversy between patients of this class and the medical attendant; accustomed to indolence and self-indulgence, they are at all times averse to active exercise, and their disinclination to it is now still further strengthened by the wearing sense of languor which accompanies this state. The above plan should be persevered in either till the catamenia make their appearance, or until, in the course of a month, the symptoms of congestion return, and require a repetition of the depleting means already mentioned. Sometimes, however, the process of development at this period is much more imperfect; the powers of the constitution are unequal to the task of effecting those changes in the system requisite for the state of puberty; the growth in all probability has been very rapid, but the trains of development have not kept pace with it; the mammæ, pudenda, &c., are still those of a child, the jaws are contracted, and she is deficient in the number of teeth usually observed at this period, she becomes emaciated, the face and lips are pallid, the hands and feet cold, particularly the latter; there is great lassitude, and the least exertion produces fatigue; the tongue is foul, the bowels are costive, the appetite is defective and irregular, the pulse slow and feeble; a more aggravated set of symptoms gradually supervenes; the complexion becomes peculiarly sallow, often of a greenish tint, and hence the name frequently given to this stage of the disease, viz. the *green sickness* or *chlorosis*. Every part of the system partakes of the general torpor; the circulation becomes still more languid, and the blood seems, as it were, to stagnate in the veins, the digestion is nearly gone, the tongue covered with a dirty coat, and indented at the edges by the teeth, the breath is fœtid, and there are frequently acid, or offensive eructations, with air rumbling in the bowels, which are generally obstinately confined, and when they are acted upon by medicine, the motions are dark and foul; the appetite is irregular and capricious, so that the most indigestible substances are often craved for and devoured with greediness; chalk, slate pencils, sealing wax, tallow, and dirt, for it is by no means true that the longing is always for articles which nature points out as salutary, as, for instance, antacids and absorbents; the spirits are weak and depressed, hysterical tears are easily excited, the girl prefers a moping solitude, and melancholy, with delusions, will occasionally be manifested. The absorbents partake of the general debility, and there will be puffiness of the face after sleep, and anasarcous extremities in the evening. Palpitation of the heart will be frequently troublesome, and there will be dyspnœa on the slightest exertion, and, along with this latter symptom, a short distressing cough. Hence it is that there is no disease more frequently mistaken for phthisis, and the error is a most serious one, for much injury would be occasioned by the remedies generally administered for the latter complaint*. Where, however, the process of development has been very defective and irregular, this state may pass into actual cachexy, the mesenteric glands become affected, and tabes, or even phthisis, may be the result.

The causes of this disease may be shortly stated, as all those which depress the vital powers, viz. a previous delicate and unhealthy childhood, insufficient or improper food, want of pure air and exercise, too close confinement to study in school, or to labour in manufactories, depressing passions of the mind, &c. †.

In treating this disease, our first and main object must be to restore the function of the chylopoietic viscera to a healthy condition, for when this point is gained, a multitude of anomalous symptoms, which veil the real features of the complaint in obscurity, quickly disappear, and one great cause of irritation is thus removed, which of itself is often sufficient to derange the process of development which is

* Parry's Elements of Pathology and Therapeutics.

* Locock, op. cit. † Locock, op. cit.

taking place. For this purpose an active purge of calomel with jalap or colocynth, followed by salts and senna, should be given, the effect of which is generally to unload the bowels of a large and sometimes almost incredible collection of dark unhealthy, highly fœtid fæces. The relief from this evacuation is frequently very striking, but, generally speaking, the purgatives require to be repeated at least once, if not oftener. We have now obtained, as it were, a fair field to work upon, and our next object must be to excite the stomach and liver to a more healthy action. For this purpose I am usually in the habit of ordering equal parts of blue pill, comp. extract of colocynth, or, if the bowels be sufficiently open, equal parts of blue pill, comp. extract of colocynth and extract of gentian: one or two pills every night, and some mild bitter infusion during the day. The bitters I usually combine with some aromatic water, such as aq. menthæ pip., aq. cinnamomi, &c., and find the addition of mucilage and tinct. hyoscyami peculiarly useful in soothing the irritable state of the stomach and intestines.

As this state is frequently accompanied with much dyspeptic irritation, amounting occasionally even to sub-acute inflammation of the stomach, we should never neglect to ascertain the presence or not of any tenderness on pressure in the region of the stomach. The appearance of prominent papillæ upon the tongue protruding through the thick fur which covers it, will frequently guide our attention to this point, although their non-appearance is no proof of the contrary. If the pain on pressure be severe, from fifteen to twenty leeches should be applied over the part, and the bleeding afterwards encouraged by a warm poultice. Where the pain is less marked, a good sized sinapism, applied as hot as the patient can bear it, will afford great relief; and by diminishing this state of the stomach, appears to assist greatly in equalising the circulation of the whole system. The headach diminishes, the extremities become warm, and there is an expression of comfort and cheerfulness in the patient's countenance, which cannot fail to excite notice. As soon as the state of the tongue and evacuations show that the chylopoietic organs have resumed a healthy action, we may commence a more decided course of tonic medicines. Where the debility is considerable, quinine may be tried for a few days combined with some aromatic, and if the stomach can bear it, a little wine may be allowed. In proceeding to the stronger tonics, as quinine, wine, &c., you must do it very gradually; you must feel your way, and carefully ascertain if the ground upon which you are about to venture be strong enough to bear you, for unless this be the case, you are liable to do more mischief than good. We thus prepare the system for the more powerful tonics of the metallic class, especially iron, which will now prove a valuable remedy. In exhibiting this medicine, it is advisable to begin with the mildest preparations; and I know of no combination which agrees so well with a stomach taking iron for the first time under these circumstances as the following:—

℞. Vin. ferri, ℥j. Infus. quassiæ, aquæ cinnam., āā ℥ ij.—M. ft. haust. ter in die sumend.

This is a form of chalybeate medicine, which will rarely disagree with any stomach, and soon enables it to bear the more powerful preparations of iron, namely, the mistura ferri comp., and pilula ferri comp. of the London Pharmacopœia.

The bowels through the whole treatment will require careful watching; and as soon as the patient has comenced the mist. ferri comp. they may be kept open with much advantage by a pill consisting of equal parts of pil. ferri comp. and colocynth or aloes; or where they require a more active medicine, I find a combination used by my uncle, the late Dr. Parry, of Bath, namely,—one part of Barbadoes aloes to two of compound scammony powder, made into pill, very serviceable. The regular use of the warm foot-bath every night (occasionally strengthened by the addition of mustard flour, as the case may require,) is of great importance. The hip-bath should be used in the morning, beginning first with warm water, and gradually changing it to tepid and cold water as the system regains its tone and strength. Friction with a dry towel, or with a towel impregnated with salt, and the occasional use of the flesh-brush, is of great service, and is a powerful means of invigorating the patient.

The diet should be light and easy of digestion, carefully avoiding all articles of food which require some time to pass the pylorus, or which are disposed to produce acid. By degrees, more nourishing food and a moderate use of wine may be permitted.

As her strength increases, the warm, and by degrees the cold, sea-water bath, or shower-bath, will prove beneficial. A pure air is very desirable, and on that account, when the patient has a little advanced, nothing is more efficacious than a residence at Tunbridge Wells, or some other places where chalybeate springs abound, combining the advantages of change of scene, a salubrious atmosphere, amusement to the mind, and the internal use of the mineral water. With returning health and strength the functions of health may be expected, and amongst them the menstruation. But it often happens, that in this particular respect we are disappointed, and we now come to the trial of those remedies which have been found, by experience, to act either directly or indirectly in promoting menstruation*.

Of those which act indirectly, we may enumerate aloes and the various drastic purgatives, which, by stimulating the rectum, produce a similar effect to a certain degree on the uterus. Preparations of iron appear to

* Locock, op. cit.

act as emmenagogues, by giving strength and tone to the general health, and by producing certain changes in the blood, which, in chlorosis, is decidedly in an unnatural state; hence the combination, already alluded to, of pilula ferri comp. with aloes or colocynth is found very efficacious; and, in some cases, Dr. Locock has added a small quantity of savin oil with considerable benefit. Stimulating injections into the rectum act in the same manner; and Dr. Schönlein, late Professor of Medicine at Würzburg, assured me that he knew of no emmenagogue so certain in its effects as 10 grs. of aloes in a small quantity of warm water, and thrown up the rectum at the time when the menses ought to make their appearance. An injection of 10 drops of liq. ammoniæ in ℥j. of warm milk once or twice in the twenty-four hours has been used by Dr. Locock with marked success. Warm hip bathing, hot and stimulating pediluvia, warm friction to the hypogastric and lumbar regions, electricity or galvanism applied to the pelvis, have by many been found beneficial; and it is often of great service to combine with one or other of these plans the application of leeches to the groins, labia, or os uteri, or to the feet once a month. The tinctura cantharidis probably acts as an emmenagogue in the same way, by stimulating the bladder, although there is reason to suppose that it also acts directly upon the uterus, from the facts which Dr. Dewees has recorded of its effects in leucorrhœa. The only medicines of modern days which can at all lay claim to that character are iodine and the ergot of rye. Dr. Coindet, of Geneva, considers the former the most powerful and certain emmenagogue we possess, and attributes its success in bronchocele to the sympathy which the uterus and thyroid gland manifest for each other. The ergot has been extensively used in various conditions of the uterus, and certainly seems to exert a peculiar and powerful action on that organ, which may perhaps deserve the name of a specific. In the cases before us, it may be tried in the form of decoction, infusion, or powder. Dr. Locock, in his valuable article on Amenorrhœa, in the Cyclopædia of Practical Medicine, says, that he has given it frequently, and in many instances successfully, in doses of 10 grains and upwards three times a-day. In very irritable habits it must be cautiously administered, as it has been found, after a few days, to produce sometimes violent and even highly dangerous spasmodic attacks.

During the last twelve months, some very curious facts have been observed resulting from the sympathetic connexion between the mammæ and uterus. You may some of you have seen a short paper which I published in the *Medical Gazette* last February on this subject, and where I showed that full and permanent contraction of the uterus in cases of atony of that organ after labour might be produced by applying the child to the breast. At the time that I had made these observations, some valuable facts of a similar nature had been observed by Dr. Patterson in the unimpregnated state, and published by him in the *Dublin Journal*. "A patient, in whom the catamenia had been wholly suppressed for two years and a half, and who had been successfully treated for an attack of fever, had been ordered a sinapism to the right side of the chest, on account of pains of an hysterical nature which had presented themselves. The sinapism had been inadvertently made so large as to cover a considerable portion of the breast; much irritation, with hardness, pain, and swelling of the gland was produced, which, in the course of about thirty-six hours, was followed by a copious discharge of the catamenia." Reasoning from the sympathetic action which exists between the breast and uterus, Dr. Patterson tried this plan of mammary irritation in another case of amenorrhœa, and with a similar result. The catamenia appeared in twenty-four hours from the application of the sinapism, with complete restoration of health *.

In the course of a month or two after these observations had been published by Dr. Patterson and myself, a curious circumstance was mentioned by a friend who is in extensive practice, and which seems to show that mustard not only possesses an indirect but also a direct influence upon the uterine system. A practitioner had been sent for by the mistress of a highly respectable girls' school, under the following circumstances:—Some of the pupils at their meals had challenged each other in play to see who could eat most mustard with their meat; the result was, that some of them even spread it upon their bread, and thus swallowed a very considerable quantity. It produced no peculiar effect among the younger girls, but among all those of the elder ones, who had already begun to menstruate, it brought on this discharge in the course of a few hours, although the regular period for its appearance had not arrived.

The menses may have been regularly secreted, but are prevented escaping from an impervious state of the vagina; in this case they gradually collect in the uterus, until it becomes very much distended. The symptoms here are generally pain in the back, with a feeling of bearing down, tension and weight in the parts, swelling of the abdomen, a frequent call to empty the bladder, or sometimes even complete retention of urine, the fæces are passed with difficulty, &c. These symptoms at first appear every four weeks, continue some days, and then disappear, probably from the menstrual fluid which had been effused into the vagina being again absorbed; at last, however, it collects in the vagina, and now they become constant, experiencing exacerbations; by degrees general disturbance of the health follows, the spirits

* *Medical Gazette*, February, 1834.

are affected, the face becomes pale, the abdomen swells and is painful; she complains of vertigo and sleepless nights, and has a frequent inclination to bear down, as in labour, &c. Examination per vaginam quickly detects the source of these symptoms*, but the farther consideration of this subject comes under the head of *Imperforate Vagina.*

Suppression of the Menses is where the discharge has been duly established, but is suddenly checked by some accidental circumstance, and may be acute or chronic. Acute suppression generally arises from some cause acting immediately previous to, or during the menstrual period, such as an attack of fever, exposure to cold or wet, anxiety of mind, frights, or any agitation of a depressing character, a meal of improper or indigestible food, &c. In such instances, if the patient puts her feet into warm water, gets into a hot bed, and takes some diaphoretic drink or medicine, the discharge will return in a few hours. But, in many cases, the acute suppression is preceded or accompanied by general fever, quick pulse, hot and dry skin, coated tongue, a flushed countenance, violent headach, throbbing of the temple, and pain in the back and limbs. In habits at all plethoric, abstraction of blood is desirable; an emetic, followed by an active saline purge, may also be given; a warm bath, hot fomentations to the abdomen, and diaphoretic medicines, combined with opium, will then be found of the greatest service; and if, after we have reduced the immediate symptoms, the menstruation is still suspended, we may consider it as a case of chronic suppression.

Chronic suppression of the menses is either the consequence of a previously acute attack, or is the result of impaired health. In the latter case it often comes on slowly, the menstrual discharge either becoming more and more scanty, or the intervals between the periods being more and more protracted, till at last there is total suppression. In either of these cases there is much the same train of symptoms as described in the history of retention of the menses, but there is almost always much more headach and pain in the loins†, the treatment of which I need hardly say will be precisely the same as in retention.

In closing this lecture, let me recommend you, gentlemen, to read an admirable article on amenorrhœa by my friend Dr. Locock, in the Cyclopædia of Practical Medicine. I freely confess that I have borrowed largely from it, and hope that by so doing I may induce you to read the whole, for, to my mind, it is the best practical essay on this subject with which I am acquainted.

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* Richter. † Locock, op. cit.

LECTURES
ON
FORENSIC MEDICINE,
DELIVERED BY
DR. HAY GRAHAM,
At the Westminster School of Medicine.

INTRODUCTORY LECTURE.

Gentlemen,—Previous to entering on the detail of the different subjects of the course of lectures it will be my province to deliver, I propose to give a brief sketch of the rise and progress of medical jurisprudence from the earliest times down to the present day.

I need not observe, that medical jurisprudence is a subject which attracts no small portion of the attention of the legislation, and is fraught with the deepest interest to the well-being of society, towards which it is most essential; for medical jurisprudence is no less than the application of medical knowledge to the formation and execution of the laws of the country, to assist the legislature and the magistrate in maintaining the public health, the rights of property, and the protection of individuals from personal injury.

The maintenance of the public health constitutes medical police. The preservation of property and the protection of the individual from personal injury form the subject of the following course, and is commonly called Forensic Medicine.

As they are both included under the general term of medical jurisprudence, it may not be amiss to give you a general outline of medical police, or state medicine, as a subject with which you ought to be more or less acquainted, notwithstanding it does not form any integral portion of your medical studies.

Medical police, or the preservation of the public health, relates to the influence of external agents, either local or general, such as the influence of air and water, and unhealthy situations, of the scarcity of provisions, of bad food, and unwholesome drink; it also relates to public nuisances, to prison discipline, to the degrees of punishment, both civil and military, to epidemics and contagious diseases, and to the laws of quarantine.

Medical police and forensic medicine are totally distinct in their rise and progress; for whilst with difficulty we can discover among the ancients any trace of the latter, we every where meet with numerous laws and regulations calculated to promote the increase of population, and to preserve the health of the people.

Indeed, when we reflect on the different objects which these two branches of medical jurisprudence have in view, we can easily account for the prior origin and great antiquity of medical police. The influence of different physical agents on the general health, such as that of air and water, of food and si-

tuation being obvious to every one, could not long escape the observation of such as were exposed to their influence, and which, at the same time, gave rise to various sanatory regulations. We have, therefore, every reason to believe, that medical police dates its origin from the earliest periods of the civilisation of man.

In ancient times the ministers of religion were also the professors of physic. Medicine and religion were naturally blended with each other, the one affording a practical illustration of those virtues which the other piously inculcates. The treatment of diseases was consequently accompanied with various religious rites and ceremonies, and, on the other hand, the duties of religion enjoined the observance of the sanatory rules and precepts of medicine.

Of this nature was the prohibition of certain articles of food as unclean, the dedication of certain days and periods for fasting and humiliation, and the daily ablution of the body as symbolical of the purification of the soul, and, by washing away their sins, they thence became entitled to absolution, as is well expressed in the singular recurrent Greek verse, engraved on a Pagan font:—

"Νιψον ἀνόμηματα, μὴ μόναν ὄψιν."

"Wash thy sins, not merely thy face."

The ancient priests of Egypt, by attentive observation and self-inflicted discipline, became perfect masters of regimen; they discovered that certain kinds of food were unwholesome and indigestible, oppressive to the animal spirits, and giving rise to, or at least aggravating, cutaneous diseases. Such kind of food was deemed impure, and the animal considered unclean. Hence the great Hebrew Lawgiver has expressly forbidden it to be eaten:—"Of their flesh shall ye not eat, and their carcase shall ye not touch; they are unclean to you."—*Levit.*, c. xi. v. 8.

When we look at the mighty monuments this interesting post-diluvian people have left behind them, we cannot but reflect that they must have made considerable advances in human knowledge. In studying these relics of antiquity we know they did so, of which we have the corroborating testimony of the old Greek authors. The whole book of Leviticus is a code of medical police, which, without doubt, Moses derived from the Egyptians. The initiated priests of Egypt were natural philosophers, who had made amazing strides in the arts and sciences, in astronomy, geometry, mechanics, hydraulics, mathematics, and I may add chemistry. For had not Moses, who was skilled in all the learning of Egypt, been acquainted with chemistry, he would not have been able to reduce the golden calf to ashes, or to have sweetened the bitter waters of Marah.

We have occular demonstration of their superior skill, I may say their perfection, in the art of bandaging and of bone-setting, and if their knowledge of the art of healing was equal to these two branches of surgery, I should not hesitate to pronounce them as accomplished physicians as any that have existed either in ancient or modern times, not even excepting the venerable father of medicine.

Indeed, from the excellent description Moses has left us of leprosy, his admirable institutions and wise system of medical police, there is every reason to suppose that he was equally well acquainted with every other disease common to the Jews or Egyptians, and that the study of medicine had been equally cultivated with every other part of his education. For it is to be borne in mind, that, as Moses "was skilled in all the learning of the Egyptians," he must have been an initiated priest of Egypt, and thus, without the claim of patriarchal or princely descent, but by the sanctity of his character, as well as his extensive knowledge and transcendent talents, he acquired more than royal authority over the people he governed.

By a singular oversight, only to be explained by the great scarcity of water in the desert, and which was eagerly sought after by the Israelites to satisfy the first wants of nature, and therefore too highly prized to be applied to the secondary purposes of cleanliness, this great man neglected to enjoin ablutions as a religious rite, an omission which the sage impostor of the desert observed and rectified by enjoining frictions of sand where water could not be obtained, a pious fiction which deserves to be commended. Notwithstanding all the precepts of medical police and treatment so accurately laid down in Leviticus, where commands are given to the priests to visit the houses infected with the plague and leprosy, or any other contagious disease, to examine the inhabitants, to establish a species of quarantine, to scrape, plaster, and white-wash the houses, to shut them up, and, in bad cases, to pull them down, to burn the clothes, and to banish the incurable from all society and intercourse with their fellow-men; notwithstanding all these sanatory injunctions, from their great omission and the consequent want of cleanliness from the use of woollen clothing, of poor and coarse food, the ancient Jews became subject to leprosy, elephantiasis, the itch, scab, or scald, and various other cutaneous diseases. In short, they became an unclean people, and have continued such down to the present day. The religion of India, both ancient and modern, prescribes frequent ablutions, days of fasting, and abstinence from certain unwholesome articles of food. Many other Asiatic nations enjoined these and similar observances, of which circumcision may be reckoned amongst the number. The Greeks and Romans enacted many laws on medical police, and, indeed, all nations that had any pretension to civilisation had various prohibitive sanatory laws. We find that, in a rude state of society, the more learned and civilised priest made these laws, both prohibitive and

nuncupative, a part of religion. Thus, from the earliest times, the rules of health were associated with religious rites, cleanliness was a pious virtue scarcely inferior to charity, and medical police constituted a portion of the sacred duties of religion, and of the moral obligations of society. Enough has been said to point out the early importance attached to medical police; but, as it forms no part of your studies, I will not occupy your time by entering more fully into its history. It is to be regretted, that a subject, fraught with so much national interest, with which every member of the two houses of legislature ought to be intimately acquainted, should not have a chair expressly dedicated to it. And, since we are indebted to the enlightened views and liberal policy of Mr. Fox for the creation of a chair at Edinburgh on forensic medicine, it is to be hoped that our present enlightened and no less liberal Lord Chancellor will confer a similar benefit on his country by creating a chair on medical police.

Forensic medicine, or the application of medical knowledge to courts of law for the preservation of the rights of property, and the protection of the person from injury, is a science of recent origin in comparison to medical police; and it could not be otherwise, when we reflect how largely it is indebted for its existence to anatomy, chemistry, and physiology, and that, during the early and middle ages, the opening of bodies was prohibited, chemistry was in its infancy, and physiology unknown. Such was the rude state of all the physical sciences during these periods of ignorance and credulity, that it was not even suspected they would be rendered serviceable to the ends of justice. In consequence of the imperfection of the medical sciences, we do not meet with any thing of importance on forensic medicine in the works of Hippocrates, whilst among them, as also in the writings of Xenophon and Aristotle, we meet with a great many passages relative to medical police. Also amongst the Romans we do not read of any judicial application of medicine, notwithstanding that many of their laws seem to refer to it, and the code of Justinian contains several enactments respecting it.

Suetonius relates, that when the body of Julius Cæsar was exposed to public view, the wounds were examined by one Antistius, who practised medicine, and that out of twenty-three only one had proved mortal, which penetrated into the thorax between the first and second ribs. The remains of Germanicus, who was suspected of having been poisoned by Piso, were also exposed to view in the public place of Antioch, previous to the funeral rites. The proofs on which the accusation rested are curious. "The bones and carcases of the dead," says the historian Tacitus, "had been disinterred. The name of Germanicus, engraved on pieces of lead, was hung, with charms and imprecations, against the walls, and also found amongst cinders mixed with blood, and other sorceries, by which it is believed the souls of the living are consecrated and delivered to the infernal gods." On these proofs Piso was condemned by the senate, who, by so doing, wished to pay their court to the emperor. It would thus appear that the ancients had some faint, imperfect notions of forensic medicine, and there are traces of it to be met with in the sacred writings. Every one is familiar with the celebrated judgment of Solomon; and we read in Deuteronomy, that, in cases of doubtful virginity, the elders are to be consulted, and the evidence of the case to be submitted to their judgment.

The Romans passed several laws in conformity with the sentiments of the Greek physicians: thus, to procure abortion became a capital crime when the fœtus exceeded forty days. The Emperor Adrian, in cases of doubtful legitimacy, limited the period of pregnancy to eleven months; and Numa Pompilius prohibited the burial of a pregnant woman until the fœtus shall have been extracted.

During the long interval between the fall of the Roman Empire and the invention of printing, or revival of letters, a period emphatically termed the *dark ages*, for science did not then shed the lustre of her light, there does not seem to have been any attempt to connect the physical sciences with jurisprudence, or to discover the truth of medical investigation. In doubtful cases, where the testimony of man was wanting, our pious ancestors had recourse to the judgment of God; and, considering the truth as part of the divine essence, they piously expected that a divine ray would clear up the obscurity of doubt, and that the truth would become manifest by the manifestation of a miracle. Thus they had their trial by ordeal, to plunge the arm into boiling water or boiling oil, to grasp a piece of red-hot iron in the hand, or to walk blind-fold among red-hot ploughshares, were considered tests of innocence, or proofs of guilt. Thus the body of a murdered man was to be touched by the suspected assassin, to observe if the blood flowed; then followed trial by appeal, or single combat, of which the modern practice of duelling is the illegitimate offspring. The accusation of impotence was to be purged with trial by congress, where the husband was to prove his virility, and celebrate the conjugal rites in the presence of a jury, composed of five matrons, five physicians, and five surgeons. The imaginary crime of witchcraft, amongst other modes of trial, was tried by drowning, which was termed *trial by water*. If the suspected wretch sank, and was thus drowned, the body received the consolatory honours of a Christian burial; but if the wretched victim floated, and was not drowned during the trial, it was decreed a sufficient proof of guilt, the criminal was condemned to be burnt, and forthwith led to the stake. Yet trials by ordeal, I am in-

clined to think, were not without their use. Being an appeal to God, they were conducted by the minister of religion. In the Church of Rome, where auricular confession forms a very essential and indispensable part of religion, where it is a sacrament, and where the anger of an offended Deity and eternal pains await those who conceal the truth, it could not but happen that the priest, in the official exercise of his duties, frequently became the depository of facts which would not appear in a court of justice; and in order to shield the innocent from the persecution of the powerful, or from the conviction of circumstantial evidence, he might, with the purest intentions, advise a trial by ordeal, and substitute a pious fraud for the decision of blind chance. But, as by the same means the greatest criminals might escape with impunity, and if no deception were practised, the innocent might suffer instead of the guilty, the legislature of every civilised nation has very properly abolished this mode of trial, and submitted to human laws the offences of man against his fellow men. However, it would appear that trials by ordeal continue to be in repute among the Hindoos, and are perhaps occasionally had recourse to among those who believe in the supernatural intervention of the Deity, and the divine suspension of the laws of nature. Dr. Paris mentions two modes of trial by ordeal in India, in which the truth is brought to light by the influence of the mind on the body. "The first of these consists in obliging the accused person to drink three draughts of the water in which the images of the sun and other deities have been washed; and, if within fourteen days he has any indisposition, his crime is considered as proved. In the other species of ordeal alluded to, the persons suspected of theft are made, individually, to chew a quantity of dried rice, and to throw it upon some leaves or bark of a tree; they, from whose mouth it comes dry, or stained with blood, are deemed guilty; while those who are capable of returning it in a pulpy form, are at once pronounced innocent." Upon which the Doctor observes, "The accused, conscious of his own innocence, will fear no ill effects from the magical potation, but will cheerfully acquiesce in the ordeal; whereas, the guilty person, from the mere uneasiness and dread of his own mind, will, if narrowly watched, most probably discover some symptoms of bodily indisposition, before the expiration of his period of probation. In the case of the ordeal by rice, a result, in correspondence with the justice of the case, may be fairly anticipated on the soundest principles of physiology. There is perhaps no secretion that is more immediately influenced by the passions than that of saliva. The sight of a delicious repast to a hungry man is not more effectual in exciting the salivary secretion, than is the operation of fear and anxiety in repressing and suspending it. Is it, then, unreasonable to believe, that a person under the influence of conscious guilt, will be unable, from the dryness of his mouth, to surrender the rice in that soft state, which an innocent individual, with an undiminished supply of saliva, will so easily accomplish?" To which the answer is obvious. I might here indulge in some remarks on the influence of mind on matter, of the passions on the nervous system, and the different secretions of the body;—thus, grief, fear, and anxiety, not only repress the secretion of saliva, but also that of the gastric guice, and therefore impede digestion. Bad news after a full meal will probably produce nausea and vomiting, and, before a meal, it will instantly take away the appetite. Thus that master of the human heart, our immortal poet, makes Henry VIII. say to Cardinal Wolsey, when he handed him those papers through which the Cardinal was deprived of all his wealth and honours, and hurled from the pinnacle of ambition down to the ground—"Read o'er this, and after, this; and then to breakfast, with what appetite you may."

These passions increase the secretion of tears and of urine, and sometimes relax the sphincters; and, though called the *depressing passions*, yet they often, like joy, produce palpitation of the heart, and increase the arterial action. I remember Dr. Gregory relating an anecdote of an officer, who was much disliked on account of the severity of his discipline. One day when he was exercising his men, a ball was fired at him, happily without effect; of course this led to an immediate scrutiny; the muskets were examined, and the cartridge boxes searched, but nothing was discovered which could implicate one man more than another. At length, the search being fruitless, a corporal offered to find out the delinquent. The men were ordered to resume their ranks, and each one to hold out his hand. Our corporal, with the sagacity of a philosopher, went from man to man, and from rank to rank, gravely feeling the pulse of each one. At last, sternly addressing one of them, he said, "You are the man!" With hesitating speech the soldier denied the accusation, but afterwards, on the promise, confessed his guilt. Violent anger acts on the liver, and with some produces jaundice. Excessive joy excites the whole system, produces a species of mental intoxication, causing jumping, dancing, singing, laughing and crying, incoherent speech, with confusion of ideas, and sometimes ends in confirmed insanity.

Medical knowledge was not rendered serviceable to the administration of justice until the age of Charles V., Emperor of Germany, and Francis I., of France. After the publication of the celebrated criminal code of Ratisbon, in 1532, called the "Constitutio Criminalis Carolina," it became a law, that the opinion of medical men should be formally taken in every case where death had been occasioned by violent means.

The passing such a law conferred additional dignity on medicine; and some time after-

wards gave rise to various works, wherein medical knowledge was strictly applied to the elucidation of the sister science of law, and thus then two learned professions became connected with each other.

Germany, therefore, claims to herself the distinguished honour of having passed the first law, and also of having produced the first authors on this subject. But it was not until the year 1573, forty-one years after the publication of the code of Ratisbon, that the first work on medico-legal subjects appeared, written by one Joachim Strippe. Afterwards several other authors wrote on legal medicine, some of course more distinguished than others. Among them we may mention the names of Bohnes, who published his Dissertation on Forensic Medicine in 1690; of Kannegiesser, who wrote on the Institution of Legal Medicine. Leichmeger published a work with the same title. Boemer, Brunner, Geilike, Loewe, Hebenstieit, and many others distinguished themselves on this subject. In 1725, Alberti published his System of Medical Jurisprudence; and, in 1702, Valentine published his Medico-Legal Pandects; and, in 1722, his Body of Medical Legal Law, in which he digested all that had been written on the subject by previous authors.

Italy has not produced many authors on this subject, but she has given birth to one whose name alone is a host. In the year 1621, Paul Zacchias published at Rome his celebrated work, entitled "Quæstiones Medico-Legales," a work which created the most lively interest throughout Europe, was frequently reprinted, and is still daily quoted by every writer and lecturer on forensic medicine.

In France, Ambroise Paré was the first who wrote on judicial medicine. His "Reports" were published in 1675, about 140 years after the publication of the code of Ratisbon, and shortly after Devreux published a work of considerable merit, on the prognosis and diagnosis of wounds. In 1768, the celebrated Louis published his letters on the signs of death, on retarded birth or prolonged gestation, on asphyxia from drowning and hanging, and on other medico-legal subjects. Since then France has, above all other nations, distinguished herself in this study, and the names of Foderé, of Chaussier, of Orfila, and many others, form a brilliant and an immortal constellation of talent. To return to the history of our subject. It was the reformation of religion that caused the first rent in that magical veil which concealed so many crimes beneath the mysterious gloom of superstition. Pigray, surgeon to Henry the Third of France, and cotemporary of the celebrated Ambroise Paré, relates the following account of a trial for witchcraft. "The court," says Pigray, "having retired to Tours in 1589, ordered the king's physician and myself to examine fourteen men and women, for whom an appeal was made to the court against the sentence of death passed on them for the crime of sorcery. The examination took place in the presence of two councillors of state; we read the evidence given on their trials, upon which they had been found guilty and condemned by the chief justice. I am ignorant how far the witnesses were capable of judging or believed in their own assertions, but we did not discover a syllable of truth in any of their statements. Amongst other things, they reported that certain parts of their bodies were completely dead to every kind of sensation. We examined them with the strictest scrutiny, and did not forget to use every requisite precaution. They were stripped naked, and carefully pricked in a great variety of places; but so far from being insensible to pain they were perfectly alive to it, and appeared to suffer very acutely. We then questioned them on many different subjects, but found they were poor stupid people, labouring under melancholia, and sick of the world. Some of them were indifferent about death, and others wished for it. It was our opinion that it would be more advisable to give them a dose of hellebore to purge rather than any other remedy to punish them. The court dismissed them according to our advice." This, gentlemen, was the last case of trial for witchcraft in France. James I. wrote a book on the subject, to prove the reality of its existence. The frequent and numerous punishments which were inflicted for this imaginary crime, continually disgraced our courts of justice down to the time of Sir Matthew Hale, when two unfortunate persons were condemned to be burnt at Bury St. Edmunds, for bewitching the children of a gentleman, and causing them to have fits. Sir Thomas Browne, a learned physician of that time, attesting the reality of diabolical illusions, declared that "he was clearly of opinion that the fits were natural, but heightened by the devil, operating with the malice of the witches, at whose instance he did these villanies," and added, "that in Denmark there had been lately a great discovery of witches, who used the very same way of afflicting persons by conveying pins into them." These imputed witches, the victims of a mistaken zeal, were generally poor, aged, infirm people, who had outlived the friends of their youth and the sympathies of their neighbours, to whom the retrospect of the past was a life of poverty and privation, and to whom, helpless and friendless, the future was a dreary waste; to them the grave was a shelter from the ills of life, and death "a consummation devoutly to be wished."

It is a sad blot in the history of the nations of Christendom—the countless thousands who have been sacrificed for this imaginary crime. All those who have been persecuted in the cause of religion, who suffered in the dungeons of the Inquisition, who expired at the stake, or were offered as an holocaust in honour of the Deity, "ad majorem Dei gloriam, bore no proportion to these unhappy creatures, who

ought to have been the real objects of Christian charity. Poverty and despair were the strongest proofs of their guilt; their crime was of a threefold nature,—against God, against man, and against their own souls. Viewed as the common enemies of their fellow creatures, they were put to death without pity, extirpated as venomous animals of the deepest dye; they did not offer the consolation of religion to these poor creatures, but beheld them with horror, and shut the gates of mercy on them." I now take leave of trial by ordeal; and, living in an enlightened age, we may congratulate ourselves that the days of chivalry and witchcraft have passed away, never again to return, except as nursery tales.

Forensic medicine did not assume a consistent form as a science until the year 1606, when that excellent and benevolent prince, Henry IV., of France, issued letters patent to his first physician, conferring on him the privilege of appointing two surgeons in each considerable town, and one in those of smaller note, who should exclusively send in official reports of all persons murdered, wounded, mutilated, or otherwise injured. In short, they were invested with a jurisdiction very similar to that exercised by our coroners.

Henry IV., who enjoyed the rare privilege of possessing a larger portion of common sense than any other prince we read of, very justly considered that medical men, and not attorneys, were the fittest persons to fill such an important office.

In 1667, Louis XIV. decreed, that no report should be received in a court of justice without the sanction of one of these medical officers.

Hitherto this appointment had been strictly confined to the surgeons. But being in the gift of the first physician, who generally sold his patronage, the situation was frequently occupied by such as had not received a regular education, and were, therefore, unfit to fulfil its duties. This abuse, combined with the well-governed jealousy of the medical colleges, gave rise to fresh orders in council in 1692 and 1693, by which this office became attached to the colleges of surgeons and physicians of the different towns, and to be held by them in common. But in order to render the reports more perfect, the magistrates were induced to summon the more learned physician to the assistance of the individual surgeon, a practice which in France has, in the course of time, acquired the force of law.

The 18th century, which was an era remarkable for the transition of the human mind from the enthusiasm of poetry and the fine arts, to the study of mathematics, natural philosophy, and the physical sciences, is the real dawn of that day which shed a new and brilliant lustre on medico-legal science. The immutable principles of truth and justice which presided at the reformation of the penal laws of France, at the same time suggested the creation of chairs of medicine, and in December, 1792, the doctrines of this science were first publicly taught in the schools of Paris.

Notwithstanding that England has so long boasted of its trial by jury, and the antiquity of coroners' inquests, yet it appears to have been very backward in the cultivation of forensic medicine as a distinct branch of science.

It was not until the commencement of the present century, that lectures were delivered upon forensic medicine, when Dr. Duncan, sen., of Edinburgh, first led the way in the year 1798, and delivered to his class several desultory lectures on the subject, which was afterwards taken up by his son, the late distinguished professor of materia medica, for whom a chair was created in 1803.

Since the science has been only lately cultivated in England, it is not surprising that we have only modern authors who have written upon it. There is a very excellent work by Dr. Beck, entitled the Elements of Medical Jurisprudence, a book I strongly recommend you to read. There is also a very good, but more voluminous, work by Dr. Paris and Mr. Fonblanque, in which the law is very fully laid down. Dr. Gordon Smith on the Elements of Forensic Medicine, is also a work very deserving of your attention. Dr. Christison on Poisons, is a work of rare merit.

There is another work which, when complete, bids fair to eclipse every other, and what certainly confers additional merit on the author, is, that he is not a medical man,—I allude to Chitty's Jurisprudence; but it is rather calculated for the general reader, than as an elementary work for the medical student.

Gentlemen, before concluding this introductory lecture, you will allow me to make a few remarks concerning ourselves, this institution, and the profession you are about to embrace.

It has been objected that we are obscure individuals, and, therefore, incompetent to the duties we have assumed. This is a very illogical conclusion, and I should not take notice of it, were it not to remark to you, that the success of this, or any other similar establishment, must depend on the talents and industry of those who profess the various branches of medical and other science therein taught.

This institution has not been hatched beneath the fostering wing of power or patronage, but is totally independent of party feeling and rival jealousy. It has been established simply because it was needed; and as it has no patronage to look forward to, beyond what its merits may procure it, there will be every stimulus to that exertion of talent, combined with that careful attention to your interests and improvement, that cannot fail to ensure it success.

I have no doubt our endeavours will be seconded by you, and as no industry will be wanting on my part, or on that of my colleagues, so do I trust that no diligence will be wanting on yours. We shall thus keep up

that good feeling, and entertain that mutual respect which ought to be the connecting link between us. I think you will agree with me, that much diligence is requisite on your part, when you look around in the world, and see how many competitors you will have to contend with in the present crowded state of the profession, and when you reflect that without such diligence, it is not probable that you will enjoy even a moderate share of success. As the late venerable Dr. Gregory has eloquently expressed it, "Nulla enim ad scientiam, aut medicam, aut aliam quamlibet, patet via regia et facilis; nec sine proprio labore et diligentiâ viam ullam sibi aperit."

"On sluggard's brow the laurel never grows,
Renown is not the child of indolent repose."

In laying the foundation of that honest fame which will not only ensure you success, but also your happiness in life, it will be our duty (magis amicus quàm magister) to operate in removing those difficulties which may obstruct your path. Like pioneers we shall precede your march, and render the road as smooth as the nature of the country you have to traverse will permit. But I apprehend no great difficultics; for, to carry on the metaphor, ours is not a sterile country, it has neither the lifeless monotony of the desert, nor yet the frowning forbidding aspect of the rock piled on rock, of Pelion heaped on Ossa. It is not the barren bewildering waste of metaphysics, nor does it resemble the dry, dull detail of legal lore, but ours is a fertile country, ever fresh and verdant; not an object but such as the eye will delight to rest upon, and not a flower or a pebble but will afford instruction and convey a moral. In a word, ours is the wide field of nature, and our pursuit is the investigation of her laws.

Review.

A Systematic Treatise on Comparative Physiology. Translated, with Notes, from the German of Frederick Tiedemann, Professor of Anatomy and Physiology in the Heidelberg University. By James Manby Gully, M. D., and J. Hunter Lane, M.D., F.L.S., &c.

It is unnecessary to apologise to our readers for not giving a full review of each work that is published—we cannot do it; we might easily fill our pages with extracts, but they would too frequently be uninteresting, in consequence of the deficiency in the context. We do, and shall, nevertheless express, in unequivocal terms, our sentiments on each book. When we meet with any new matter it shall be extracted, so that justice may be done to the writer, by diffusing extensively, as our journal must do, his discoveries to the world.

It is true, that physiology is the foundation of pathology, as healthy anatomy is to morbid. But in these hypothetical days, where "Elements," "Manuals," and "Systems" of Physiology so largely abound, we begin to feel ungenerous, and regret at such an exuberance.

Malthus and Harriet Martineau deprecate marriage, on the principle, that the products of the earth are not equal to the support of so increasing a population. We, however, have no such fearful forebodings. With reference to science we are anxious to see new labourers in the field. The number of labourers in the vineyard, we opine, cannot increase too rapidly, or be too numerous.

Neither country nor clime will prevent us from awarding every meed of tribute to each respective author. The name of Tiedemann, in conjunction with that of Gmelin, has been, for a long series of years, one of high reputation. From such a man, and in the publication of so large a work, we have a right to expect a superior production, a work containing not only the records of ancient and modern physiological theories and discoveries, but one imbued with original views; doctrines, which not only display the great works of nature in a clear and graphic manner, but which tend to the grand object of all industry and all science, the amelioration of corporeal suffering, and the removal of human calamities; doctrines which are applicable at the bed-side of the sick, and which can be applied, efficiently, to the practical department of medicine. We can but refer to a few points in this work.

The object of the author is to give a physiological view of the vegetable and animal kingdoms, as introductory to the physiology of the highest of the animal species, namely, man. In the preface it is announced, that the phenomena of life and their conditions are the chief subjects of inquiry in this work. To examine the mechanism and vital properties of plants, to trace the organisation of animals in the great ladder of living beings, and to show the analogies which subsist between them and the human subject is the intention of the present work.

The book comprises a full detail of almost all the opinions, doctrines, theories, and hypotheses in every European country, which have been

promulgated in modern times. The author, if we may infer from his works, is an honest man, he claims but few discoveries to himself; he is in addition a modest man. In perusing this volume we meet with many shrewd conjectures, many sensible observations, advanced in the true spirit of philosophy, without egotism. This book cannot be compared to any of its predecessors in physiology. We have not one in the English language which possesses the slightest similitude. Mayo, Allison, the translations of Magendie, Richerand, Rudolphi, and Hutin, &c. are works valuable in their kind, they embody the more recent and recognised doctrines in physiology, but Tiedemann, in addition to these, presents us with the notions of men in almost every age and every civilised country. It has been a work of great labour, and required most uncommon industry. In the accumulation of facts and in their generalisation, reflection to a high degree and much judgment have been exercised; but we could not expect less from so celebrated an author. When discussing the vital properties of plants, after having registered a multitude of circumstances connected with the motility of the vegetable fibre, the subsequent conclusion is one which has been arrived at, "that the torsion is a manifestation of life, which does not depend on purely mechanical causes, as Sennebier maintained, and that it cannot be attributed to muscular contractility, as Fontana thought, since the movement is neither accompanied by sensible contractions, nor determined by stimulating causes, producing contraction in living muscles. It is plainly, according to the very judicious remark of Broussonit and Palm, the consequence of movements effected by external influences, which are favourable to development and growth. It appears to be accompanied by a more copious afflux of humours, by a movement of turgescence, excited by the stimulus of light, and producing an increase of tension and movement." The volume contains such an immensity of matter and such a variety of opinions on each topic, that we have difficulty in selecting the author's own views on any one subject. We can affirm without hesitation that the book is unrivalled as a physiological text book; at the same time it is not adapted either to the student, as are those of Richerand, Magendie, Mayo, &c., or to the general reader, like that of Roget, but to the physiologist advanced in his studies, to those individuals who are engaged in original prosecutions, as well as to the teacher of physiology, it contains a mine of rich value. To those individuals we earnestly recommend the work.

We have given but one quotation, which is indeed similar to the man who, when he went to sell his house, took a brick as a specimen.

The translators have performed their task with credit; the notes which are affixed in the form of an appendix, are but facts accumulated upon facts.

CASES AND OBSERVATIONS ON FUNGUS HÆMATODES.

BY WILLIAM BAINBRIDGE, ESQ., M.R.C.S., TOOTING.

(*Continued from p.* 274.)

The existence of this tumour in a cellulo-vascular structure like that of the perinæum, affords to my mind one argument in controversion of the doctrine inculcated by some pathologists, that the several varieties of tumours are always somewhat analogous to the texture of the parts in which they are located, for I cannot perceive the slightest resemblance between the cineritious substance of the brain and any of the parts near the rectum. If the tumour had consisted of accidental erectile tissue, to which, according to Andral, the epithet Fungus Hæmatodes has been applied, some similarity between the disease and its seat might have been traced, but that was not the case here. I have at this present moment a patient who, 25 years ago, had his upper jaw severely bruised, during the effort to extract a tooth; afterwards a tumour made its appearance in that situation, which has continued to increase, and now occupies a very considerable portion of the superior maxillary bone, it presents all the characters of carcinoma; now, in this instance, what fellowship can there be between the tumour and its site, the bone? Again, small tumours are sometimes found on the surface of the peritoneum nearly resembling cartilage; and not unfrequently in the substance of the most solid bones soft deposits possessing the cha-

racter of brain; surely these are not much like their several places of location. But the most urgent reason for rejecting this comprehensive generalisation, is derived from the fact that precisely the same disease affects indiscriminately almost every structure of the body; thus medullary tumours are found in bone, veins, glands, cellular, vascular, and nervous tissues, and serous membranes. The notion of its (medullary sarcoma) nervous origin may also be combated by these considerations, as well as the circumstance of its being frequently seated where few nerves are visible, and of its often being unconnected with, or implicating the nerves of the part. A mere resemblance of colour, consistence, or chemical constitution, should not be insisted upon as an argument, because a slight variation in elementary proportions is quite sufficient to establish a wide difference; besides were this a deposition of nervous structure, it ought surely to possess the property of nervous matter in some slight degree, whereas we know it to be completely devoid of any such endowment. With respect to the analogy which some have attempted to establish between fungus cerebri and fungus hæmatodes, the simple fact of the former having been sometimes cured by well-directed pressure, would of itself be a sufficient refutation. Fungus cerebri, moreover, is the common result of some violent shock to, and perhaps disorganisation of, the brain, and the withdrawal of the resistance to internal pressure; and after death there is found a deficiency of the hemisphere from which the fungus proceeded; its course is also much more rapid than true fungus hæmatodes.

It is the property of some substances, when introduced, however small in quantity, either from without or by means of internal changes, in the animal economy to generate their like, and thus to vitiate the entire system; for instance, a very minute portion of the virus of small-pox, or rabies, is sufficient to generate in the whole body a poison, which is the facsimile of itself. A like contamination is also the result of the presence of medullary sarcoma, scirrhus, &c. To this *power* of assimilation is attributable the inveteracy, and to the *facility* of assimilation the malignancy, of their nature, as well as to the *kind* of transformation which is effected. The state of scirrhus, however, appears to me to be dependent on some other, though it may be somewhat similar, pathological condition than that of medullary sarcoma, because the one will sometimes exist for years without manifesting any sign of the other's presence. About six months ago I examined the body of a woman, who had been the subject of scirrhus some years, and from whom Mr. Lynn had removed a scirrhous breast (this, I believe, was the last operation that venerable surgeon performed in public); the parts in the immediate vicinity of the cicatrix, and the absorbent glands in the neck and axilla were scirrhosed, the right axillary vein was full of a very firm dirty white deposit, which cut something like a piece of cheese; this had occasioned the arm to swell enormously, and ultimately to mortify; the whole extent of the pleuræ and peritoneum was studded with numerous whitish radiated patches of the form and size of drops which had fallen from a wax candle; the lungs here and there contained *firm* tubercles, generally about the size of a hazel nut; the mesenteric glands exhibited the same formation; the liver was a mass of scirrhous matter. In this case there was nothing which could be likened to medullary sarcoma, or fungus hæmatodes; it therefore appears to countenance the belief in the individuality of the two, and their dependence upon distinct pathological conditions.

The term "humoral pathologists" has of late years been regarded as one of reproach. Bichat, however, says, in the introduction to his Anatomie Générale, that "although the humoral pathology has no doubt been carried too far, it is founded on truth, and in a great many instances we must allow that *all* should be referred to morbid humours. If, then, backed by such authority and such proofs, as are to be collected from what has gone before, I venture to contend for the blood being the source of these tumours, I trust I shall not be considered too presumptuous. But, for what I consider to be almost demonstrative proofs of the correctness of this view, I beg to refer to Dr. Carswell's Second Fasciculus on Carcinoma. Dr. Carswell has also very properly grouped these diseases under the common appellation, carcinoma, because if even their resemblance of structure had not been so great as to justify such a measure, yet their arrange-

ment under this term was judicious, inasmuch as it stamps their character of malignancy, and, as it were, holds up a beacon to warn the surgeon of their real character. Andral, indeed, long ago suggested the expediency of denominating "all these lesions cancer, tending to produce an ulcer, which spreads in every direction, and either slowly or rapidly destroys all the surrounding tissues."

The inquiry, whether tumours which were at first innocent can become malignant, and whether in all cases malignant tumours were primarily simple, is a very interesting and important one. In the Medico-Chirurgical Review, for April, 1831, page 521, three cases are related, which are supposed to instance the former of these, but to my mind they do not carry complete conviction; I should occupy too much space if I were to attempt to analyse them, and will therefore content myself with merely referring to the cases. Sir E. Home believes "cancerous diseases are never so in their origin," but that simple tumours are first formed by deposits from the blood, which have afterwards impressed upon them a cancerous nature in consequence of some peculiarity of constitution; this opinion he illustrates by the case of John Hunter, who in throwing a stone lacerated some fibres of the pectoral muscle, in consequence of which a sanguineous tumour was produced, which however dispersed, and he felt no more of it; but in another gentleman, to whom a similar accident occurred, instead of the tumour disappearing, a cancerous fungus grew up, which occasioned his death. There is here, however, no proof that the effused blood was not in a cancerous state at the time of its effusion. No doubt tumours, which in the progress of development differ very much, appear in their early stage not unlike each other, but the very circumstance of their afterwards manifesting other characters, seems to prove that there must be some primitive dissimilarity not apparent to the eye. The wonderful reproductive power of fungus hæmatodes, after repeated extirpations and the usual effect of local applications, appear to point to some other remedial measures than have hitherto been employed. The operation can only be available upon the first appearance of the tumour; after it has attained any considerable size I should consider I best served the patient by letting it alone, and only attempting to improve the state of the health; at present we know of nothing calculated to effect any amendment in the system after it has become so universally degenerate, but in the progress of medical science, in the march of medical intellect, something may be discovered sufficiently potent to eradicate from the human body the taint of scrofula, phthisis, cancer, and other diseases of a like malignancy,—this were "a consummation devoutly to be wished for."

THE

London Medical and Surgical Journal.

Saturday, October 11, 1834.

REMARKS ON DR. BOSTOCK'S CIRCULAR.

Dr. Bostock has published a circular, containing a series of suggestions for the education of medical pupils, and the regulation of the practitioner. We shall make a few comments on some of its contents. Did we not know that the Doctor is a man of good sense, and sound judgment, and "an honourable man," we should be selfish enough to suspect that he had some remote anticipations of obtaining "a place" under the system he is advocating; but no, we are not so ungenerous. His motives we will not question. In his own words his object is, "first, to ensure to the public a succession of competent medical practitioners, secondly, to promote the respectability and dignity of the medical profession, and, lastly, to encroach as little as possible upon the rights and privileges of existing institutions." We will ask Dr. Bostock, in the first place, how is it possible to erect a new board, a new institution, which shall possess an entire and unlimited governance of the whole profession, and yet reserve to the College of Physicians, the College of Surgeons, the Apothecaries' Company, and all other medical corporate bodies, their rights and

privileges? This to us is a paradox, or we grossly misconstrue the Doctor's meaning.

1st. "A Medical Board to be established by Act of Parliament, to consist of five members, two practitioners, two scientific men, not necessarily in practice, and one member of government; to remain in office for three years; to be appointed by the Secretary of State for the Home Department. After the first three years one member to be changed annually and replaced by another. To have a permanent Secretary.

2nd. "Medical practitioners to be divided into four classes:—

I. "Doctors of Medicine, who are supposed to be completely educated.

II. "Masters of Surgery, equally well educated, but to pursue a different curriculum.

III. "Licentiates of Medicine and Surgery, similar to the present general practitioners, their education to be *less complete*. Dr. Bostock would not object to an union of this class with the 4th, viz. the Druggists. Each class may practise midwifery, if legally qualified."

All penal statutes respecting medical practitioners to be abolished, Government providing qualified men, who may slay their fellow creatures and yet be shielded under the wings of Government. The Doctor is liberal enough to allow the public, if they prefer quacks, to consult them.

Every school that possesses an adequate number of teachers, who may give a requisite number of courses of lectures, &c., and the school have been in existence a certain number of years, "is to be recognised as a medical school, or university." The students at such schools, as the Board may recognise, to be eligible as candidates for a diploma. Pupils not to be *apprenticed*, but "*pupillage* to be substituted" for a discretionary period, under the cognisance of the *Board*. The period of study to be five years, three of which are to be spent in a recognised school, and two at a hospital for the first three classes; for a druggist one year at a "school."

The *hospitals* are to be controlled in the medical department by the Board, with reference to size, convenience for instruction, &c., and such to be named Authorised Hospitals. Then we have a detail of the number of lectures which should be attended. The "Master of Surgery" would require two courses of surgery and only one of physiology, whilst the "Doctor of Medicine" would require a greater number of courses of medicine and physiology, but less of surgery. The Doctor of Medicine is of course to be a better physiologist than a Master of Surgery. "Certain foreign Universities" might be authorised at the option of the Board.

The Board of Examiners to consist of five persons, two of whom are to be members of the General Board, and three Professors from the Medical Universities.

"The existing Universities and Colleges, like other learned bodies, may grant honorary degrees, but a degree conferred by the '*Board*' of Examiners is alone to be considered as entitling the party to be styled Doctors of Medicine, &c., and to affix the appropriate letters to their name." What will the learned College of Physicians say to the worthy Doctor? He would not prohibit them the high honour of granting "*honorary degrees.*" No. What profundity of thought, what consummate wisdom the author has displayed in this article, and what urbanity and liberality to the "existing Universities and Colleges." The existing practitioners to be invited to go through the new form; the invitation would, we imagine, seldom be received, each would

find an excuse. If an individual has received an *honorary diploma*, part of his examination may be remitted by the *Board*.

For a Doctor or a Master's degree the candidate must prepare a dissertation on some professional topic, and defend it in his native tongue; but he is, nevertheless, to be examined in Latin, the great bugbear to students at the present day. Examinations to be held in London twice a-year, in the months of May and September, each candidate giving notice a month previously. The fee for the Doctor or Master's diploma to be 10*l.*, and that of the Licentiate (general practitioner) and druggist to be 5*l.*

The members of the Board are to visit the different Universities and authorised Hospitals at least once a year. "Nothing in this Act to affect or interfere with the property or rights of the present Universities or Colleges, except so far as concerns their power of granting degrees and of prohibiting individuals from practising; in order, however, to enjoy the benefits of the Act, they must conform to the above regulations. The above system, in all its parts, to remain in force for the space of five years, then to be revised by a Parliamentary Commission; the same to be repeated every five years."

Dr. Bostock has written much and judiciously on medical science, but the present "Outlines of a Plan for the future Regulation of the Medical Profession" contains some of the veriest nonsense that was ever penned. If this be the Doctor's first attempt to reform the profession, which we believe it is, we would recommend him, as friends, as admirers of his philosophic character, never to renew the endeavour. A man may be a profound philosopher, yet be unable to regulate the affairs of a nation or a community; and the maxim never received a more palpable verification than in the present instance. After all, what changes does the Doctor wish to effect? Not the one faculty, but a quadripartite faculty, as, in short, exists at present, giving but new names to old things. His *Masters of Surgery* correspond to our *Pure Surgeons*, his Licentiates of Medicine and Surgery to the general practitioners. The titles of Doctor and Druggist are to remain in *statu quo*, except that the latter is to have prefixed the appellation *Licentiate*; a general governing Board; abolishing apprenticeships; the existing Universities, &c., to have their privileges maintained inviolate, yet to have the power of awarding only honorary distinctions. In the next edition of the Doctor's "Plan," we shall have, no doubt, many revisions and corrections.

MEDICAL RESPONSIBILITY.

More than 700 medical men of Paris assembled on Saturday to take into consideration a question of medical responsibility. Dr. Nauroy, of the department of the Eure, performed the operation of bleeding upon one of his patients; some bad consequences followed, for which he was not consulted. An officer of health amputated the arm, in which a gangrene had commenced in the part lanced. An action was brought by the patient against Dr. Nauroy, and the Tribunal of Evreux, deciding a question to which it was totally incompetent, condemned M. Nauroy in damages to a considerable amount. There is no medical man who does not know that the operation of bleeding, however skilfully performed, may be attended with serious results; and certainly the judges were totally incapable of discussing the elements of the problem submitted to them. The Doctors of Physic agreed to furnish Dr. Nauroy with the means of supporting an appeal against this decision, and a subscription has been opened for that purpose.—*Le National.*

Reports of Societies.

LONDON MEDICAL SOCIETY.

Monday, Oct. 6th, 1834.

W. KINGDON, Esq., in the Chair.

THE subject, which had undergone partial discussion, was resumed this evening; little, however, of real interest was elicited. The principal reason which induced individuals to rise, evidently depended on a misconception of the previous speaker, or of the original essay, in consequence of the laxity of medical phraseology. As an illustration of this, we may state that the meaning of Sir A. Cooper as to the peculiar kind of fever he considers would follow intermittents, was completely misunderstood, inasmuch as some were of opinion that he alluded to a symptomatic fever dependent on some previous injury, another believed that he alluded to typhoid symptoms, or those indicating low fever, such as dark fur on the tongue, sordes, decubitus dorsalis, small and weak pulse, &c., while a third party could not explain the sentence, other than by considering Sir A. Cooper to mean that the intermittent type would follow. Surely, as the question is one of such interest, and some of the members must be acquainted with the baronet, it would have been desirous to have inquired of him what he really meant, instead of spending two nights in discussing the meaning of an individual living in the same city with them.

The speakers were Drs. Shearman, Whiting, Blicke, and Thomson, Messrs. Dendy, Kingdon, Moore, Stephens, Greville Jones, and one or two others whose names we could not learn.

Dr. Blicke powerfully illustrated the intermittent condition of the constitution after it has suffered from ague, by stating the fact, that on the return of the troops from Flushing, send them where you will, they were sure if they were taken ill to have the disorder assume the intermittent type. Even the inflammatory fever consequent on a broken leg, soon put on the same character. He afterwards alluded to visceral disease as following ague, and gave a strong instance of the frequency with which this happens, drawn from the same source. He considers that the spleen is principally affected, and next to that the liver.

There seemed to be a strong impression on some part of the Society that visceral disease is not so common a consequence of protracted ague, as has been supposed, but the writer of this is treating at this present moment a case of double quotidian, attended with hepatic affection. He can also refer with confidence to the statements of Dr. Rousseau, in his essay on ilicine, where he narrates several cases of abdominal disease, consequent on, and occurring during the existence of, intermittent fever.

One more remark may be signalised. In answer to a question addressed by the President, Dr. Thomson said, that, according to Louis' investigations, synochus caused a greater proportion of deaths from visceral disease than ague; he would say three-fourths, but if he were to include the affections of the mucous membrane in his estimate, he might consider it as nineteen-twentieths. Some objections were entertained to these calculations, as it was not understood that persons frequently died of ague without some consecutive disease ensuing. To this Dr. T. replied that the greater part of those dying, while suffering from intermittent fever, fell victims to inflammatory affections of the lungs, which Louis looked upon as accidental, and having no dependence on the disease previously in existence. Mr. Dendy dissented from this opinion, as, during the cold stage of an intermittent, congestion the cause of these visceral complaints, took place, and where was it so likely to occur as in the lungs?

The thanks of the Society were voted to Dr. Shearman for his interesting paper, and it was announced that an essay by Dr. Uwins, entitled "Strictures on certain Theories in Medicine," would be read at the next meeting.

WESTMINSTER MEDICAL SOCIETY.

We are happy in being enabled to inform our readers that the session of this valuable Society commences on Saturday, the 18th of October, according to the by-laws.

ON Wednesday last Dr. Lister was elected as Assistant-Physician to St. Thomas's Hospital.

A NEW INSTRUMENT FOR ASCERTAINING THE EXISTENCE OF CALCULI IN THE BLADDER.

To the Editors of the London Medical and Surgical Journal.

Gentlemen,—Knowing the zeal you have always evinced in promoting the advancement of medical science, I have ventured to trouble you with a brief account of an improvement in the instruments commonly used in sounding for the stone, and request its insertion in your valuable journal, if you deem it of sufficient interest. Having for some years devoted considerable attention to the treatment of calculous disorders, I have very frequently had occasion to notice the unnecessary quantity of irritation and suffering to which patients have been compelled to submit, during the operation of sounding; first from the force with which the stone is sometimes struck by the sound, in order to render its presence distinctly audible, producing a painful concussion against the posterior parietes of the bladder; and, secondly, from the frequency with which the operation is repeated by different individuals not sufficiently near to the patient to have obtained, at first, this aural evidence of the presence of the foreign body. This inconvenience I have endeavoured to remedy by the addition of a small sounding board, consisting of a circular deal board, about six inches in diameter, and one-eighth of an inch thick, fixed by its centre *perpendicularly* to the stem of the sound. The direction of the sounding board, in relation to the sound, is material, inasmuch as on that depends the facility with which the vibrations, which have travelled along the instrument, are developed and rendered audible. This expedient I have found to succeed completely in rendering the presence of a stone in the bladder distinctly audible to a considerable distance, by the application of a very slight impulse, nor does the size or weight of the board render the use of the sound in the slightest degree inconvenient. I have been in the habit of using the recto-curvilinear sound of Baron Heurteloup, an instrument at the present time, I trust, too well known to require description, and the only one I am acquainted with, by which a complete and satisfactory examination of the bladder can be made; to the stop-cock of this instrument the sounding board is adapted by means of a wooden plug fixed in its centre.

I am, Gentlemen, yours, &c.

Chas. Brooke, M.B., Surgeon.

Westminster, Oct. 7th, 1834.

Foreign Medicine.

ACADEMIE DE MEDECINE.

Discovery of the Itch Worm.

BY M. RENUCEI,

Assistant to the Course of M. Alibert.

M. Renucei stated to the Academy, in a note, that he had reserved for his thesis experiments which for nine years he had been attempting of the itch worm; but, that he might possess the priority of the discovery, he had been obliged to publish the principal results.

In 1815 he applied many acari on the feet, hands, and arms of a healthy infant; the experiment succeeded, and the infant became affected with the itch. He then extracted all the insects he could find on the body of the child, and this permitted slight remedies suffice to cure the disease. M. Renucei then observed, that these insects were much more easily extracted from children than adults, in consequence of the fineness and transparency of the epidermis.

A number of times he repeated his experiments, amongst others in 1824–25–26 and 27. He observed that the disease was always contagious from contact. In Corsica, he remarked that the disease was more contagious than in climates more approaching the north. The insects are also of larger size than in Paris. It is not confined either to the feet or hands, as has been so frequently asserted. M. Renucei has discovered them on the extremity of the prepuce, on the ears, and even on the face; but in this latter situation they are extremely rare.

At the termination of the letter, M. Renucei stated, that in Corsica an eruption very similar to the itch attacked numbers, but more particularly those who spent their time in the mountains. In this eruption there was no trace of an insect, and it appeared in psoriform vessels. Mountaineers, however, appear exempt from it, even if they come down on the

plains; nevertheless, they are subject to the true itch.

On Monday, the 13th of August, during the Course of M. Alibert, he presented to this lecturer an insect, which he had just extracted from a person affected with this disease. The animalcule exactly resembled those which Degier and other entomologists have described in the itch.

On the following Wednesday the experiments were resumed, and two more insects were discovered on a female, who, till now, had not been admitted into the hospital. Great interest has been excited throughout the capital, and fresh experiments are made daily.

Morbid Sympathy between Twin Brothers.

COMMUNICATED BY M. CAGENTRE, OF BORDEAUX.

Mrs. S—, June 30, 1822, who had previously borne three children, brought forth twins, two brothers. During the period of pregnancy she enjoyed perfect health. Adolphus and Theophilus, the named twins, were entrusted to two women living under the same roof to wet nurse, a few days after their birth. During the period of lactation, they were not attacked by any particular disease, though now and then, like most children, they were slightly indisposed. But what was remarkable, however slight the indisposition might have been, when one became poorly, the other was also indisposed, the symptoms in both being precisely the same. Derangement of the alimentary canal from dentition, intestinal worms, &c., always made their appearance in both precisely at the same moment, and the symptoms in both were of equal intensity. After remaining fifteen months in the country, their parents received them home. Since this epoch they have been attended by Dr. Nourel, who, after carefully watching them, verified the remarks already made by the nurses. Up to the present time, 1831, the following are the different diseases he has observed in both of them. Quotidian intermittent fever commenced and finished in each on the same day; acute conjunctivitis, colic, which in both lasted 24 hours. Two molar teeth in each made their appearance at the same time.

In 1832, they had different eruptions exactly of the same nature; during last winter, both, for the same length of time, suffered from bronchitis. In 1833, they were attacked with measles, after which with scarlet fever; in both these diseases the symptoms were precisely similar; their commencement and termination in both were exactly at the same periods. In 1834, intermittent fever, ear ache, of which both cruelly suffered. Finally, a short time since, Theophilus felt an intense itching on the posterior part of his neck, an eruption appeared on this part, in the form of small vesicles. The next morning Adolphus was affected with precisely the same rash; it was at this time that M. Cagentre saw the children, and observed on each precisely the same phenomena. Theophilus since his birth has been of feeble frame, meagre, but of lively disposition; Adolphus is more robust, and extremely indolent. Both are of the same height, occasionally play together, and frequently quarrel. Their dispositions are entirely opposite.

Cholera Morbus at Madrid.

The epidemic which has been raging in this capital has, at length, entirely ceased. The Madrid *Medical Gazette*, which at first strongly denied the existence of this disease in its capital, was, in some of its latest numbers, obliged to retract; and has even, in its last publication, given a full account of the progress, symptoms, treatment, and mortality of the disease.

The first case appears to have been observed towards the latter end of June. On the 28th and two following days of this month not less than twenty-one deaths took place in the different hospitals. From this time to the 15th of July the deaths were not many. On this day the deaths suddenly increased to 247, though the evening before they only amounted to 58, of which 70 died in the hospitals, and 177 in their houses. On the 19th there were 364; on the 18th, 291. From this time to the 31st of June, every day the deaths were less. On this day 129 individuals died; on the 1st of Aug. the mortality was 112. After this they gradually decreased till the 21st, at which time only 20 individuals died daily, 16 of which took place at home, and only four in the hospitals.

The total number of deaths from the 28th of June to the 21st of August, were 4869.

Nothing new has taken place in the Spanish

treatment, we will, therefore, close by giving a translation of a small article which we find in the number of the *Med. Gazette of Madrid* for August 20th. It bears on the question of contagion.

"The Royal Medical and Surgical Academy of the Royal College of St. Charles, and a meeting of the hospital physicians, have been consulted on this important disease, and on its contagious nature. They replied by a remarkable majority, that they regarded it simply as an epidemic, for not the least proof of contagion had existed amongst them."

Employment of Albumen against the Cholera.

Several cases have been published by M. Levacher, of Paris, in which the symptoms of this disease were extremely violent, that succeeded to this albuminous treatment. He has the white of eggs beat up in snow, and mixed with cold sugar and water, and administers this, both by injections and by the mouth. He further states, that in the course of 20 minutes after the employment, the patients are comparatively recovered. In this country the albumen of the egg has been tried, but it was mixed up with alkalies, which may tend to destroy the curative properties of the albumen.

Effects of Transfusion in a Case of Cholera.

Archibald M'Cameroy, who was brought to the cholera Hospital, in Duane-street, on Saturday evening, in a state of collapse, was perfectly insensible, his skin was cold and blue, his pulsation at the wrist had ceased, and his eyes were in that sunken and apparently dissolved state which marks the worst stage of the cholera; in short, there was no hope of his recovery. In this state Dr. Ferris, the hospital physician, injected his veins with a weak solution of salt in warm water. It had an immediate and surprising effect. It restored the circulation at the wrist, brought back some degree of warmth to the skin, caused the eye to brighten up with intelligence, and, in a word, restored the patient to sense, recollection, and speech. He was now able to give a clear account of himself, in what manner he was first taken, how he had been affected until he lost his senses, and, indeed, to converse in a perfectly rational manner, the same as when in a state of health. In this state he continued for about an hour, when he sank suddenly away and expired. During the time that his speech and sense continued, he would been perfectly capable of making his will; and here an important consideration is suggested, to wit, that, though the patient may be in that state that he cannot be cured, he may, nevertheless, by means of *transfusion*, be restored at least long enough to settle his earthly affairs.—*N. Y. Trans.*

Observations on Wounds of the Head.

BY PROFESSOR DIEFFENBACH.

This Berlin Professor considers wounds of the head much more dangerous than have generally been considered. Thus ordinarily, he says, we fear only wounds of the head, with fracture of the cranium, with splinters, with compression, irritation, extravasation, inflammation, or commotion of the brain; and little attention has been paid to wounds of the external soft parts. There is, however, a great difference between a simple wound of the skin, and a wound of the integuments covered with hair. If from any cause a person receives a simple incision of the head, so that one part of the wound interests the scalp, and the other the skin of the forehead, you will find that, in spite of every care of producing reunion by bandages, plasters, &c., the first will sometimes pass into a state of suppuration, and sometimes unite, but the neighbouring parts will become the seat of erysipelatous inflammation, which, at a later period, will suppurate; while, on the contrary, the second part of the wound, occupying the forehead, will, in a few days get perfectly well. This proves the peculiar vulnerability of the scalp, which, in consequence, merits our attention.

Frequently has M. Dieffenbach seen death supervene from the most simple wounds of the scalp, in consequence of the ensuing erysipelatous inflammation, which causes delirium and death. In the other cases he has seen deep suppuration take place, causing denudation of the bones of the cranium, and death the result. In fact, there exists an intimate connexion between the external and internal surfaces of the bones of the cranium, so that a disease, produced externally, is also frequently produced internally.

This erysipelatous inflammation of the scalp, which frequently is the cause of death,

is accompanied with violent symptoms of inflammation of the dura mater, and this latter membrane becomes extensively separated from the bone, and an unctuous matter exudes from the external surface. Frequently we find a purulent deposition, corresponding to the external wounded part, and which escapes from the opening in the form of thin ichorous matter. What still, however, adds to render wounds of the scalp serious, is its tendinous structure. This tissue is exposed to inflammation of the acutest form.

All wounds of the scalp, however slight they may be, require active antiphlogistic treatment; all incisions should be avoided. Atmospheric air introduced into the wound decomposes the stagnant blood, which excites irritation. But in cases of abscess, large incisions are requisite. A small opening is useless, in fact injurious; and though secondary reunion in recent wounds is advantageous, it is hurtful in these cases; for the two surfaces of the sphacelous cellular tissue entirely decompose, and become more and more altered; even healthy granulations, if pressed one against the other, partake of an unhealthy character. It is necessary, then, to approach the two edges, and keep them separated by an intermediate body.

In support of these practical remarks M. Dieffenbach quoted forty-eight cases, the progress of which he observed in his own practice.

Wound of the Testicle from the Bite of a Serpent—Cure.

— Assimus, on the 5th of April, 1834, while in a forest, was bitten in the testicle by a serpent, the species of which he did not know. Immediately he received the bite he took his pen-knife from his pocket and extirpated the wounded parts. From the excruciating pain and loss of blood he became for a short time senseless; however, shortly after, he slightly recovered, and was able to return to the city. As soon as he got home, Dr. Koeppen saw him, and, on an attentive examination, he found the wound three inches and a half in circumference, the scrotum as large as a child's head, black; the penis was inflamed, and had also a dark hue. One of the testicles, which, from the bite, had been separated from the spermatic cord, whilst dressing became perfectly detached, and the bite of the serpent could be easily traced about its substance. It was impossible to bandage the part, in consequence of the excruciating agony it produced. The following cold application was applied—water a pint, vinegar four ounces, hydrochlorate of ammonia half an ounce, and some nitre was administered internally. After taking various innocent mixtures, such as the Germans usually prescribe, the patient recovered, with the loss of one testicle.

Foreign Hospital Reports.

HÔPITAL NECKAR.

Strangulated Femoral Hernia—Operation—Cure.

On the 28th of August, 1834, Blankern, of a sanguineo-nervous temperament, a labourer, was admitted into this hospital, under M. Bricheteau. In the evening the woman was attacked with abundant and frequent vomiting, accompanied with numbness and cramps, especially in the left leg. The dresser prescribed 15 grains of pulv. ipecac. The vomiting continued during the night. The next morning the patient presented the following symptoms: prostration; much anxiety of countenance; a bluish margin surrounding the eyes, the latter sunk in the orbits; extremities cold, and of a bluish appearance; pulse imperceptible; voice feeble; vomiting ejection of a bluish hue; suppression of fæcal matter and urine; frequent cramps. Leeches were placed on the epigastrium, and opium prescribed.

30th. Extreme prostration; coldness of the extremities; skin of a livid hue; constant vomiting; cramps, especially in the right arm; voice weak and indistinct. When admitted the disease was mistaken for cholera, but to-day crural hernia was observed on the left side. The woman stated, she did not perceive the tumour until the time of her admission, and she thought it had been produced from the effect of vomiting. The tumour within the last two days has become much increased, it is now larger than a walnut, the integuments covering it are of the same colour as usual. It was difficult to determine whether or not these severe symptoms arose

from hernia; if strangulation was the cause, reduction by operation would check these painful symptoms.

M. Vidal, who was in the hospital, was consulted. On examination of the tumour, together with the symptoms as mentioned, not the least doubt was left on his mind as to the nature of the disease (strangulation), in spite of a few local symptoms characteristic of this state being absent.

Some useless attempts were made to reduce the tumour, and M.M. Bricheteau and Vidal decided on an operation.

M. Vidal performed the operation before a number of students. After he had made his first longitudinal incision in the skin, parallel to the crural arch, the operator dissected with precaution the cellular tissue and subjacent aponeurosis; he arrived thus at the hernial sac. The peritoneal covering was not much thickened, and with a director and a pair of scissors the sac was opened. The intestine was thus exposed; its appearance was healthy. M. Vidal now endeavoured to pass a sound into the crural arch, which with difficulty he succeeded in doing. A straight bistoury was necessary for the division of the stricture; the hernia still remained irreducible; another stricture was divided, and the gut returned to its natural cavity.

The operation lasted about a quarter of an hour; the edges of the wound were kept together by adhesive plaster and bandages. The health of the patient immediately became improved; the vomiting ceased, cramps disappeared, general reaction took place; the pulse till now had been imperceptible, and her extremities became warmer; passed a comfortable night.

On the 31st, twenty-four hours after the operation, the following was her condition:—Temperature natural; colour of hands and face normal; pulse feeble, but regular; no vomiting, bowels still confined; great thirst; slight pains about the abdomen; tongue moist; voice stronger.

This patient remained in the hospital till the 10th of September. Since the operation she has been gradually improving; no particular symptoms supervened, and she left the hospital at this period perfectly well.

HÔPITAL ST. ANDRE DE BORDEAUX.

CLINICAL REMARKS BY M. DUTRONILH.

According to an account made by M. Bonnefin, dresser to this hospital, 218 patients were taken in during the month of July, under M. Dutronilh *. A great many of these patients were attacked by chronic disease. The following were the principal diseases:—ten patients with phthisis pulmonalis, eleven with organic affection of the liver, two women with organic disease of the uterus, six with chronic pulmonary catarrh. Most of the other patients were admitted either for chronic or acute inflammation of the different organs, but more particularly the digestive, accompanied with fever, &c.

The different types of intermittent fever have also been numerous; twenty-four individuals were brought forward at the clinic, all of whom were attacked with similar affections. Four amongst them, however, were attacked with fever of an intermitting character. Quinine was prescribed, which shortly checked the disease: one, however, of these individuals died during the accession at the time of his admission. On the autopsy, the spleen was the only organ found altered in structure; it was four times its ordinary size. A similar affection was also discovered in other individuals who died previously of this disease.

Three small glasses of the decoction of guaiacum were administered, three times daily, to two patients attacked with articular rheumatism, accompanied by œdema of the legs and arms. Both patients got much better under this treatment Two cases of ulcerated sore throat got speedily well by a decoction of bark as a gargle.

Many phthisical patients, in an advanced state of the disease, have become alleviated, and the disease rendered indolent, by medicated water mixed with milk. Three patients, in particular, who came in the hospital with much difficulty of respiration, and emaciation, left comparatively well.

Three painters attacked with colica pictonum. The symptoms were combated by frequent evacuations from croton and castor oil. These patients remained in the hospital a few days, and left in perfect health. The

* Bull. Méd. de Bordeaux.

number of cases of cure spoken of by M. Dutronilh in this affection, by this drastic oil, coincides with the opinion of many practitioners, both in this country and on the continent.

He has prescribed ipecacuanha with advantage in several cases of dysentery and diarrhœa.

Several cases of pneumonia also had been successfully treated by tartar emetic, and other depletive means.

Few deaths have taken place during this month, and those that have died have fallen victims to lesions of some principal vital organ. A post mortem examination has been made on every individual that has died. We have given the post mortem appearance of the one that died of fever, the others present nothing remarkable.

In three that have died of phthisis evident cicatrices of the ulcers have been found. A captain in the navy was admitted for a disease of the liver, and died. On the autopsy, the liver was found four times its ordinary size, and its substance was filled by scirrhous encephaloid tumours, and on the inferior lobe existed a large abscess, which communicated with the stomach.

The serous membranes had become altered, and contained more fluid than natural, especially the peritoneum. The precise symptoms that he suffered from, previous to death, were not accurately ascertained.

British Hospital Reports.

ST. THOMAS'S HOSPITAL.

Popliteal Aneurism—Ligature of the Femoral Artery—Gangrene of the Leg—Amputation.

William Cannon, æt. 45, a labourer in the country, and a strong healthy person, was admitted into St. Thomas's Hospital, under the care of Mr. Green, on the 28th of August. He states that about a fortnight ago he felt some pain in the situation of the tumour, but did not perceive the enlargement until some days afterwards, when he was examining the part. He immediately applied for advice to a surgeon, who bled him to a pint, and recommended him to the hospital. Mr. Green examined the tumour, and pronounced it to be an aneurism of the popliteal artery, though not a very large one.

Sept. 4. He has had very little pain since his admission, but complains of a slight cough, for which he took pulv. rhœi. cum hydrarg. ℈j., vin. antim. tart. ♏ xv., liq. amm. acet. ʒss, ex mist. camph., 6tis horis. He also took ext. colocynth, grs. xv., which acted upon the bowels twice.

5th. Operation for tying the femoral artery was performed to day by Mr. Green, who commenced in the usual way. On dividing the sheath, a small anomalous artery was divided, which, for a time, bled profusely, and in consequence of which Mr. Green found it necessary to extend the incision into the sheath, as this bleeding vessel was situated just at the upper part of his first incision. A ligature was next passed around the femoral artery, which also included the orifice of this bleeding vessel, and the pulsation in the popliteal tumour ceased. As so much of the sheath had been opened in consequence of this vessel, Mr. Green thought it advisable to place another ligature below the first, and divide the artery. This being done, the edges of the wound were approached by means of bandage and adhesive plaister. Almost as soon as he was removed to bed, the foot became very cold, otherwise he appeared comfortable. Hot bottles were immediately applied to the limb.

5th, 7 P.M. The temperature of the limb is very much reduced. He complains of a numbness and cramping pain about the leg and foot; is exceedingly restless. Pulse full and soft, but rather quick; tongue moist. Tinct. opii ♏ xxx., ex mist. camph.

6th, 1 A.M. The pain still continues; the patient is very restless; the leg and foot still cold, and marked on the inner side by a bluish streak; he has had no sleep; pulse the same. Tinct. opii ♏ xxx., ex aquâ statim.

10 A.M. Pain considerably abated; he is more comfortable; the foot is still cold, and the bluish streak broader. Pulse 72; tongue moist; skin rather hot; has been dozing a good deal since last report.

2 P.M. Quite free from pain; the foot and leg are warmer; has been dozing a good deal during the morning.

8 P.M. The foot and leg very cold, except when in contact with hot bottles; the blue colour is still extending; there are several half yellow and purple spots on the outside of the foot; the extremity is now kept warm by frictions with hot flannels.

8 A.M. The blue colour continues to extend on the outside of the leg. He has lost all sensation in the toes and upper part of the foot. The limb has been constantly rubbed since the last report; he has not slept during the night in consequence; feels faint and tired; pulse 75.

8 P.M. Mr. Green has seen him to day, and ordered him ammon. subcarb. gr. v., tinct. hyoscyami ♏ xv. ex mist. camph. quartâ quâque horâ, and some beef tea.

He complains of more pain in his leg, of a pricking and shooting character; the discoloration extends to within two or three inches of the head of the fibula, which appears to be bounded by a tolerably defined white margin, which is acutely sensible on the inner side of the leg. The discoloration does not extend so high; pulse 84; some thirst; the rubbing is discontinued, in order to allow him some sleep; the temperature is kept up by flannels round the limb.

8th, 6 A.M. He slept some hours during

the night by means of 3ss. of the tinct opii. The temperature of the limb is about natural; there is no pain in the limb unless touched, and then at the upper part it is acutely sensible. The skin of the foot has become brownish; there is a swelling in the upper part of the calf of the leg, which when touched gives him excessive pain.

6 P.M. The part of a deeper brown colour; the discoloration does not extend at the upper part of the leg, but the white line is more distinct; both this and the upper part of the discoloration, as well as the swelling, are acutely sensible. The opiate is ordered to be continued at night; bowels have not been relieved since the operation; ordered ext. colocynth. gr. xv.

9th, 10 A.M. He has passed a good night; the toes are of a deeper yellow-brown colour and insensible; pulse 90.

10th, 10 A.M. Has suffered a great deal of pain in the leg and foot, which, to use his own expression, was close to the bone; the cuticle appears to be raised in a few places into small bladders; he has had two evacuations; pulse rather quicker.

11th. Has passed a good night, the pain in the leg being less; pulse 90.

15th. Continues much the same, sometimes complaining of much pain, at others quite easy. The leg is of a deeper black colour, with several vesications, and very much swollen and tender. Bowels regular, pulse 90; he is very irritable.

16th. Much the same.—Tinct. opii, ℥xv. 6tis horis.

17th. He has been very restless; the discoloration has spread considerably since yesterday.

18th. The patient, for the last few days, has been seen by Mr. South for Mr. Green. There not being the least chance of saving the limb in consequence of the extent of gangrene, Mr. South thought it necessary to remove it. The operation was performed in the usual way, by the circular incision; much venous hæmorrhage supervened. Four arteries of considerable size were secured by ligatures, and the edges of the wound approximated. After the operation the patient became faint and languid, for which ℥xxv. of tinct. opii, and a little wine, were prescribed.

Six P.M. Quite comfortable; slight discharge from the wound has already taken place. Pulse 100, small; skin moist. Altogether appears much more comfortable than before the operation.

Nine P.M. The tinct. opii was repeated; four ounces of port wine were prescribed, with water, to be taken during the night.

Great attention has been paid to the patient. Since the second day of the operation he has been doing remarkably well. The stump, at the present time, has nearly healed; and if he continues to improve as rapidly as he has done, will soon be enabled to leave the hospital.

The operations on Friday were not of any particular interest. The patient with stone was merely sounded, and the operation deferred for another day. The femoral artery was also tied for another case of popliteal aneurism; and a patient of Mr. Tyrrell's was brought into the theatre, on whom he had previously engrafted a new nose, which the operator endeavoured to put into proper shape. The case has not, as yet, appeared in this Journal, but as soon as the man has recovered from the reform which has taken place in his nose, we will give the details of the case.

WESTMINSTER HOSPITAL.

Cases of Spinal Injury and Disease.

CASE I.—*Injury of the Spine.*—Thos. Green, ætat. 46, residing at Paul's Cray, Kent, was admitted November 6th, 1832, into John's Ward, under Mr. Lynn. Is a person of sanguineous temperament, middle sized, and stout. About fourteen weeks previous to his admission, he fell from a haystack and alighted on his feet. He experienced a jar in the neck, and suffered from giddiness and swimming in the head, which symptoms were relieved by the treatment resorted to by his medical attendant, viz., bleeding, cupping, leeching, and blistering. On admission, projection of the third, fourth, and fifth cervical vertebræ was observed, with paralysis of the superior extremities, attended with numbness to such an extent, that he could not grasp any object with the hand. The left upper extremity is principally affected; the lower ones are not paralysed, nor is there any affection of the bladder or rectum; some slight degree of difficulty of breathing exists. The bowels are generally constipated.

A seton was passed in the neck, and the bowels kept open by occasional doses of house medicine. Low diet.

Dec. 9th. The paralysis has almost entirely disappeared, remaining only in the left arm, and that slightly. Appetite good; bowels open. Placed on full diet.

Jan. 1st, 1833. He can now raise the left arm to his head, and the numbness is almost gone.

19th. He complains of pain occasionally darting in the arms.

29th. Continues to recover power in the upper extremities; but for the last few days his health has been disordered; the tongue covered with a brown fur, chiefly in the centre, with constipated bowels. Mr. White, therefore directed the use of blue pill and colocynth at night, occasionally, to set him to rights.

Feb. 5th. Takes a pill every other night, and his health is improving.

16th. Has recovered the use of his limb, and the seton is consequently to be healed. Discharged on the 19th.

(*To be continued.*)

ROYAL COLLEGE OF SURGEONS.

NAMES of Gentlemen who received Diplomas during the month of September, 1834.—T. Dixon, Preston; G. Crutch, Loudwater, Bucks; W. R. Williams, Caernarvon; J. A. Wills, Brompton, Middlesex; W. T. Tyson, Canterbury; S. Maberly, Webb-street, Southwark; F. C. Gray, Alton, Hants; F. Anderson, Belfast; J. Griffin, ———; P. G. Heatley, Manchester; J. Jeffares, Dublin; W. Phillips, Brocton Grange, Salop; B. Blower, Shrewsbury; L. Davies, Llandilos; E. H. Moxon, Rochester; J. L. Lucas, Northampton; S. Murchison, Bath; J. Scholfield, Ashton-under-Line; C. H. Higgins, ———; J. Smith, Wigton; B. Moses, Brampton, Cumberland; W. Gretly, Liverpool; A. Moses, ———; M. Pagson, Southampton-street, Fitzroy-square; C. Leach, Penzance; C. L. Parker, Long-Acre; J. McDermott, Newmarket, Co. Clare.

APOTHECARIES' HALL.

NAMES of Gentlemen to whom the Court of Examiners granted Certificates of Qualification on Thursday, October 2nd.—John Sladden, Eastry; Frederick Davies, Wells; Isaac Guillemard, Exeter; Robert Blyth, Colchester; John Hawkins, Peckham; John Acton Booth, Wigan; Thomas Mills Beaumont, Huddersfield; Henry Bullock, Pickwell; John Coats, Rochdale; James Deane, Spalding; Samuel Sharman Brance, Lowestoffe; Henry Rixon, ———; Alfred Robert Temple, New Malton; William Stuart, Woolwich; Thomas Burton, ———; Lawrence Spencer, Preston; Thomas Lewen Marsden, Leeds; Jos. Denley Sainter, Doncaster; Chas. Upton, ———; Thomas Walker, Abingdon; Henry Palver, Cambridge; John Slyfield Garland, Weymouth.

MISCELLANY OF FACTS.

M. DUPUYTREN'S disorder is, we are sorry to find, assuming a more dangerous character. He no longer goes out; the last visit he paid was to M. de Rothschild, who, ten years ago, paid him 100,000 francs for the restoration of a broken thigh. M. Dupuytren, however, still continues to give advice at his own residence, and speaks with great coolness of his health, it is said, allowing himself not longer than three months more to live. He will leave, it is said, five or six millions (upwards of £200,000) to his daughter, Madame de Beaumont, whose husband is a Peer of France.

M. Joseph Giobert, whose death we insert in our obituary to day, was a pupil of Lavoisier and Fouveny, and contributed more than any other learned man to the improvement of chemistry in Italy.

APPOINTMENTS.

Naval.—Mr. Isaac Nott, surgeon of H.M.S. Stag. Mr. Jas. Salmon, assistant-surgeon to H.M.S. Columbine. Mr. John McDermott, assistant-surgeon to the Spartiate, to be acting surgeon of the Sparrowhawk, *vice* Stevenson, invalided. Mr. J. Chalmers, assistant-surgeon to the Victory. Mr. J. Robertson, assistant-surgeon to the Raven. Mr. H. H. Hammond, assistant-surgeon to the Medea. Mr. J. Morrison, assistant surgeon of the Buzzard. Mr. H. Tracey, assistant-surgeon to the San Josef. Mr. J. Coulter, surgeon to the Ætna. Mr. Thomas Thomson, surgeon to the Champion. Mr. J. Syme, surgeon, and Mr. R. M'Crea, assistant-surgeon to the Raleigh. Mr. H. Goldney, surgeon to the Stag. Mr. D. Kennedy, surgeon to the Algerine. Mr. J. Kidd, surgeon, from the Cruizer to the Pearl. M. J. M'Donald, surgeon to the Brisk. Mr. J. Munro, assistant-surgeon to the Tartarus. Mr. G. Mottley, assistant-surgeon to the Plover packet. Mr. J. Andrews, assistant-surgeon to the Viper. Mr. J. C. Bowman, assistant-surgeon, to do duty at Plymouth Hospital. Mr. G. D. Austin, ditto, to do duty at Haslar Hospital. To be Assistant-Surgeons.—Messrs. J. Cornthwaite Bonnian, and George Daysh Austin.

Military.—Dr. Fisher to the Military General Hospital at Cove, near Cork. Staff Assistant-Surgeon G. G. Robinson, M.D., has been appointed surgeon to the 1st Foot, vice Miller, appointed on the Staff. Staff Assistant-Surgeon H. Fisher, M.D., is appointed assistant-surgeon to the 69th Foot, in place of Assistant-Surgeon Coghlan, who goes to the 86th Foot.

During the last quarter, ending the 1st inst., there were only three medical deaths in the navy—namely, one surgeon, and two assistant-surgeons.

DEATHS.

Sir Joseph Dacre Appleby Gilpin, M.D., Inspector-General of Hospitals. M. Joseph Giobert, Professor of Chemistry as applicable to the Arts, at Turin. Dr. Howse, surgeon of the County Mayo Infirmary. In Edinburgh, Dr. Andrew Inglis, F.R.C.S. Mr. Covey, surgeon of the Birmingham Dispensary. M. A. Young, surgeon, of Birkenhead, near Liverpool. Mr. A. J. Sandwith, surgeon, of Helmsley, Yorkshire. Mr. C. W. Wright, surgeon, of Hunter-street, Brunswick-square. Mr. W. Hedley, surgeon, of South Shields. Mr. W. Tipping, surgeon, of Skipton, Yorkshire. Mr. T. Gilbanks, surgeon, of Brampton, Cumberland. Mr. G. Crooks Rosenbohm, surgeon, of Gateshead.

LITERARY INTELLIGENCE.

LECTURES on the ordinary Agents of Life, as applicable to Therapeutics and Hygiene, or the Uses of the Atmosphere, Habitation, Baths, Clothing, Climate, Exercise, Food, Drinks, &c., in the Treatment and Prevention of Diseases. By ALEXANDER KILGOM, M.D., M.R.C.S., London. Edinburgh: Adam and Charles Black. 1834.

A Compendium of Pharmacy, explanatory of the Chemical Decompositions of the Pharmacopœia Londinensis. Illustrated by new and comprehensive Diagrams. By W. MEADE, M.R.C.S. London: Jackson, King-street. 1834.

Medico-Chirurgical Review. No. XLII. Oct. 1834.

Medical Quarterly Review. No. V. Oct. 1834.

Edinburgh Medical and Surgical Journal. No. CXXI. Oct. 1834.

Reflections on the Nature of Inflammation, and its alleged Consequences. By DAVID BADHAM, M.D., one of Dr. Radcliffe's travelling Fellows from the University of Oxford, and Fellow of the Royal College of Physicians, London. pp. 67. Glasgow: 1834.

CORRESPONDENTS.

Mr. W.—Had his Essay on Cholera been compressed into the space of half a column, we might have inserted it. He does not prove that cholera is simple inflammation of the mucous lining of the alimentary tube, displaying itself similar to the effects of arsenic; and we beg to remind him that he has no claim to the originality of promulgating such a doctrine. His only case in proof is that of a man who died of intoxication, having taken several quarts of porter, gin, brandy, &c. If these "potations pottle deep" would not produce gastro-enteritis and death, what would?

Mr. Ashwell's reply to Dr. Blundell was received too late for publication in our last number; and, as it has already appeared in other journals, we think it needless to insert it in the present number.

O. N.—It is our intention to give a weekly obituary in this Journal. We shall commence in our next number.

A St. Thomas's Student.—We cannot insert his communication, unless he will favour us with his name.

All Communications and Books for Review to be forwarded (free of expense) to the Publisher, 356, Strand, near King's College.

THE

London Medical and Surgical Journal.

No. 142. SATURDAY, OCTOBER 18, 1834. Vol. VI.

LECTURES ON THE THEORY AND PRACTICE OF MEDICINE,

BY WILLIAM STOKES, M.D.,

Delivered at the Medical School, Park Street, Dublin.—Session 1833–34.

LECTURE XXXVII.

Intermittent Fever—Definition of—Phenomena of the Paroxysm—Internal Congestions—Development of Local Disease—Affections of various Viscera—Theory of Broussais.

Gentlemen,—To-day we commence the consideration of intermittent fever. One of the most prominent characters of this affection is expressed by its name; we have all the phenomena of fever making their appearance at certain periods and then disappearing, leaving an interval in which the constitution seems to be in the normal state, and continues so until the supervention of a second attack. It has been also termed a primitive, or essential fever, in which there is no original local disease, and where the fever in the beginning is not symptomatic of any local lesion. We may define intermittent fever as a primitive, or essential, fever, composed of many paroxysms which recur at certain periods, and in the intervals between which we have a state of apyrexia, or freedom from fever. This definition, though applying to the great majority of cases, is still to a certain degree imperfect, for we meet with examples of this disease, in which the periods of attack are by no means regular or certain, and the state of apyrexia between the paroxysms not well marked. Thus, in two cases of intermittent, we observe that in one the patient appears, during the interval, to be completely free from fever, while in the other we find that the febrile symptoms continue to a certain extent after the subsidence of the paroxysm. As a general definition, however, the foregoing is tolerably good, and will be quite sufficient for practical purposes.

Another remark to be made on this subject is, that an intermittent is not necessarily an essential fever. We may have it from lesions of various kinds. You are all familiar with that form which attends bad cases of stricture and retention of urine, and which has been called urinary fever. Here we have fever of an intermittent character, not essential but depending upon a local lesion. We have many other instances of a similar kind, and I could easily multiply examples.

I shall not take up your time by entering into a description of the various divisions of intermittent fever, it is a species of knowledge unconnected with any point of great practical importance, nor does an acquaintance with the nature of the disease, so far as frequency of paroyxsm is concerned, shed any useful light on its treatment. The same principles of treatment are applicable to quotidian, tertian, quartan, and every other variety of intermittent. Besides we know nothing whatever of the nature of an intermittent. We are here as much in the dark as we are in the case of continued fever. We are still in complete ignorance as to the cause of the periodicity which is so remarkable a feature of this as well as of other diseases. It is enough for us, in the present state of medical science, to know that such things exist, and, leaving the researches after the cause of the disease and its periodicity to future investigations, let us study the effects of the disease, and direct our attention to things within our reach.

Let us, as far as we can, examine what takes place during the paroxysm of an intermittent. I think it my duty, as a lecturer on practical medicine, to direct your attention to this point rather than to the history of intermittents; this is, I grant, not devoid of interest, but it is a subject on which you will find ample information in the various systematic treatises on medicine. My intention is to endeavour to point out the true principles of treatment; I shall, therefore, enter no farther into the history of intermittents than what is connected with diagnosis. This will certainly diminish the interest of a lecture on intermittent fever, but this cannot be helped; it would, in a limited course of lectures like this, be quite out of my power to lay before you the mass of curious and instructive

matter connected with the history of intermittents. The paroxysm of an intermittent fever has been divided into three stages, the cold, the hot, and the sweating; but it simplifies the matter very much, to consider it as divisible into two stages, the sweating being the result of the hot stage. With respect to the cold stage I shall endeavour to establish three great propositions. In the first place, it appears (and this is highly important) that, in the majority of cases (I do not say in all, for there is no general rule in medicine), there is, during the cold stage, a perceptible lesion of one or more internal organs, and that there is congestion of many, if not of all, the viscera of the three great cavities. To use a modern phrase, we have, during the cold stage of an ague, a state of hyperæmia of the internal and anæmia of the external parts, or, in other words, the balance of the circulation is lost, the blood forsakes the surface and accumulates in deep-seated organs. The next proposition is, that this hyperæmia, from frequency of repetition, or excessive violence, may be accompanied by, or productive of, an inflammatory condition of these organs. Lastly, that organs thus altered may in themselves become sources of irritation, re-act on the system, and powerfully tend to keep up disease. You see, then, that, in considering the phenomena of intermittent fever, we must follow the same road as in continued fever, and regulate our inquiries more in relation to the effects than the cause of the disease.

The first of these propositions—that during the cold stage of an ague there is a congested state of almost all the viscera—is proved in every way that a pathological proposition can be proved. It is confirmed by an examination of the symptoms, by the results of treatment, and by the appearances seen on dissection. In this country we very seldom have an opportunity of examining the bodies of patients who have died in the cold stage, for the intermittents of these countries are trifling in comparison with those which are observed in warm climates. But the fact is fully borne out by an examination of those who have died in this country under such circumstances, as well as by the more numerous examples occurring in countries in warmer latitudes. Let us take the different parts of the system during the cold stage, and see how far the symptoms point out an accumulation of blood. First, let us review the nervous system. There is a feeling of tension and fulness about the head, the patient complains more or less of headach, the sensibility is diminished, and there is frequently stupor and coma, and in violent cases there may be convulsions. All these circumstances are indicative of congestion of the brain; and accordingly we find, where we have an opportunity of making an examination, that the venous system of the brain is in a state of engorgement. In some cases the carotids and their branches have been observed full of dark coloured blood, the congestion of the lungs having interfered with the process of aëration. In the intermittents of warm climates still more remarkable effects have been witnessed—enormous congestion of the vessels of the brain, and frequently effusions of blood into its substance; so that the symptoms during life, and the appearances seen after death, tend to confirm the fact of congestion, so far as the brain is concerned. If we turn to the pulmonary system, we find that nothing is of more common occurrence, during the cold stage of an ague, than lividity of face, anxiety, cough, and hurried breathing; and when we come to examine the chest, we find more or less dulness of sound on percussion, and the other physical signs of congestion of the lung. This is further confirmed by dissection; the lung is congested and of a dark red colour; it will often sink in water, and presents a condition closely bordering on hepatisation. If you examine the heart, you will find that its action is oppressed, the pulse is small and irregular, and the right ventricle, with the vessels attached to it, are found engorged. Proceeding to the abdominal cavity, we find the same indications of congestion. There is a sense of pain and fulness in different parts of it; the patient has vomiting, often diarrhœa, and a copious discharge of urine;—all this shows a violent determination of blood. You have often heard of the tumefaction of the spleen which accompanies the cold stage of an intermittent. Now, so rapidly does this occur, and so extensive is the engorgement, in many instances, that shortly after an attack, we can readily feel and trace it distinctly. On dissection, we meet with abundant proofs of congestion; we find the liver highly engorged, the intestinal mucous membrane very vascular, the mesenteric and portal veins filled with blood, the kidneys congested, and the spleen enlarged. Cases of rupture of the spleen from excessive congestion during the cold stage of ague, and of hepatic apoplexy from the same cause, are described by Bailly. These facts are sufficient to prove the truth of the first proposition—that, during the cold stage of an intermittent, most of the internal organs are in a state of congestion. We are led to suspect this from the symptoms, and our conjectures are confirmed by dissection. Indeed, the most superficial observer must be struck with the remarkable retreat of blood from the superficial parts of the body. The skin is pale and shrivelled, the bulk of the limbs diminished, the countenance collapsed, the whole surface cold, and superficial vascular tumours are observed to lose their vascularity and become reduced in size. All these circumstances lead us to the supposition of internal congestion, and this is corroborated by the results of dissection, which show the various internal organs in a state of hyperæmia, and shows the retreat of the blood from the surface, and its accumulation in deep-seated parts.

The next proposition is equally important

—that the frequent repetition, or excessive amount of these internal congestions, may and does give rise to an inflammatory condition of the affected organs; in other words, that the hyperæmic condition of certain viscera during the cold stage of ague, and their subsequent organic lesions, stand in the relation of cause and effect. We find that the effect produced by the cold stage on the viscera is twofold; we may either have congestion independent of any organic alteration, or we may have inflammation. In some cases, particularly in those which occur in warm countries, the congestion is followed by violent inflammation; in others, as in the cases of this country, we have chronic inflammation produced. But whether we meet with one or the other, whether the inflammation be acute or chronic, we find that as soon as the viscera become affected in this way, a state of constitution is brought on in which the power of the usual remedies is diminished, and their use frequently prejudicial. New local inflammations are set up in various organs, *and these, which were in the beginning only the effect of the disease, become, by reacting on the system, the cause of its continuance.* In warm climates, where the congestion is excessive, there is nothing more common than to see fatal pneumonia, or violent gastritis, or rupture of the spleen, or cerebritis supervening on a bad attack of ague. Strictly speaking, the production of inflammation in organs seems to belong more to the hot than the cold fit, and this we can easily understand. In the cold stage, the viscera are in a state of intense congestion; violent reaction then comes on with the hot fits; and when we have in any organ a stasis of blood and violent action of its vessels occurring during the existence of this stasis, it is not surprising that inflammation should be the result.

In the hot fit, all the phenomena, which we have been just now examining, are reversed. Every thing indicates that the energy of the circulation is about being restored, and that there is a powerful determination to the surface. The pulse gradually rises in strength, the rigors gradually disappear, the skin which was cold and shrivelled, becomes hot and tense, the face which was blanched and collapsed, assumes a full and flushed appearance, the cough and hurried respiration are relieved, the vomiting, diarrhœa, and discharge of urine cease, and the stupor is removed. The vessels on the surface of the body become more and more distinct, and in those who have large superficial veins, those vessels (though there was no appearance of them during the cold fit) stand out in bold relief like so many thick cords. I have alluded before to the greater severity of the cold fit of the intermittents of warm countries; the hot fit exhibits a corresponding degree of intensity. The cold fit is generally accompanied by violent vomiting and purging, spasms, and convulsions; the hot stage is attended with fits resembling apoplexy, and is frequently succeeded by intense pneumonia, cerebritis, and other forms of visceral inflammation. Such occurrences are rarely seen in the fevers of this country.

The great principle to be borne in mind with respect to intermittent fever is, that, during the cold stage, the viscera are in a state of congestion, and consequently fitted for the reception of disease. When the hot fit comes on, this state of congestion generally disappears, but if it should continue, we shall have a chance of inflammatory action being set up in one or more viscera, and in this way we may have a number of points of irritation in the system, complicating the original affection, and tending to retard the operations of nature and art towards a favourable termination. You can easily understand, that if the lung, which has been in a highly congested state during the cold stage, does not, during the succeeding hot stage, throw off the load of blood completely, it will be less able to accomplish this at the next attack, and so on, until at length the process of inflammatory alteration is firmly established. The same observation applies to the other viscera. In some cases, just as in continued fever, we have the brain chiefly engaged, in others the lung, in others the digestive system, and, in the intense agues of tropical climates, we often have the three great cavities simultaneously attacked. You will observe here, gentlemen, that the production of visceral disease depends on two circumstances—first, on the intensity of the congestion, and, secondly, on a frequent repetition of the attack where the symptoms are less violent. In this country, the latter seems to be the principal cause.

From these considerations, we come to the important law, that after some time we are not warranted in looking upon ague as a simple fever, but as a fever of a compound nature, involving affections of many important viscera, to which we must attend carefully, if we seek to practise with safety and success. It is singular, that the majority of medical men appear to look upon the effects of an intermittent as being very circumscribed. You have all heard of enlargement of the spleen. Now I have known some practitioners who appeared to think that this was the whole pathology of intermittent fever, in fact, that there was a very close connexion between enlargement of the spleen and ague. This, I need not tell you, is a very imperfect view of the question; the spleen suffers like other viscera, but there is no separate relation between its enlargement and the production of intermittent fever. The reason why attention has been chiefly directed to it is, because its lesions are generally more manifest than those of other viscera. It is composed of a loose, spongy, erectile tissue, it receives in its natural condition a great quantity of blood, it becomes rapidly and extensively enlarged during the cold fit, and hence it becomes a

very prominent and remarkable sign of the disease. But, I believe, that in all cases where the spleen is found to be enlarged, you will also be able to detect disease of the liver or lung. All the viscera are more or less liable to suffer under similar circumstances; there is, in a word, no single acute or chronic disease which may not be the result of intermittent fever. In this country, it generally gives rise to chronic disease; in warm climates, acute visceral inflammation is more commonly the result. Here we arrive at another very important consideration, namely, that it may happen that the phenomena of an intermittent shall cease, and yet the chronic disease produced by the violence or persistence of the original malady will continue. This is exceedingly common. We frequently meet with chronic disease of the heart, lungs, or brain, with dysentery, diarrhœa, peritonitis, affections of the kidney, and chronic inflammations of the liver and spleen, brought on by intermittent fever, in this country. These local affections are the result of violent congestion, and the continued irritation which accompanies the early paroxysms of the disease; and though the symptoms of ague may subside, the morbid irritation, which has been set up in the constitution, may proceed to such an extent that death may be the result of a complication of visceral affections thus produced, and this I believe to be the history of many chronic cases of ague. Chronic affections of the lung, liver, brain, and digestive system, are then the chief things to be dreaded or guarded against in a case of intermittent fever; for after all that has been said about the enlargement of the spleen, it seems to me to be the least important of the visceral lesions which follow ague. It appears in almost every instance (at least as far as we can see of it in this country) to exercise but very little influence over the economy. In warm climates, indeed, it is sometimes so much enlarged as to produce serious inconvenience by its pressure and bulk. Thus in South America it has been observed, that in bad cases of ague the spleen has become so enormously increased in size as to fill nearly the whole abdominal cavity, producing great derangement of the digestive organs, and actually hernia. Dropsy, jaundice, chronic hepatitis, diarrhœa of an intractable character, various nervous affections, amentia, an atrophied state of the system, phthisis, hectic, typhus,—all these constitute part of the morbid affections which follow in the train of ague as it appears in this country, and all will be found connected with various chronic visceral lesions which have been the immediate results of the original disease.

When called to treat a case of ague which has been going on for some time, you will generally meet with one of two things; you may find that the viscera have, or that they have not, suffered much from the effects of congestion. Now, when organic changes of viscera take place, we have the remarkable circumstance of their active tendency to keep up the original malady. Here you will frequently see practitioners prescribing bark, and if you watch its operation, you will sometimes find that it does more harm than good. But if, on the other hand, attention be directed to the local lesion, neglecting the intermittent for some time, you will that the removal of the local disease brings back the intermittent more or less to its original state of simplicity, and renders it amenable to the specific. Observe the importance of this. The same rule holds in intermittent as in continued fever; you must practise with an eye to the state of the viscera, and recollecting that the disease which results from one as well as from the other may be in its turn cause and effect. Here I shall take an opportunity of making a few observations with respect to a theory of intermittent fever, which has been put forward by such high authority that we cannot pass it over. I allude to the theory of M. Broussais, in which he endeavours to show that intermittent and continued fevers are reducible to the same form, namely, an irritation of the digestive system. To this view of the question a great many facts are opposed, all tending to prove that disease of the digestive system (which is so common in intermittent as well as continued fever) is to be looked upon more as an effect than as a cause. It is absurd to say that intermittent fever is merely an intermittent gastro-enteritis, when dissection shows that we have not only disease of the digestive tube, but also of the heart, lungs, and brain. The fact of coexisting visceral inflammations was passed over by M. Broussais, and certainly it must be acknowledged that this is a very simple mode of getting rid of a strong objection. His doctrine was, that fevers, intermittent as well as continued, are only examples of the effects of irritation of the digestive system, the continued fever being significant of severe and extensive disease, the intermittent of an affection of a milder character. He also maintains that the rigors are produced by, and proportionate to, the internal irritation. Now, admitting for argument's sake the two first propositions, what do we find to be the fact? That in continued fever, where the irritation is greatest, the rigors are comparatively trifling, while in intermittent, where the irritation is less violent in degree, the rigors are remarkably intense. Here we see intense rigors with slight disease, and trifling rigors with intense disease, two facts strongly militating against the proposition of M. Broussais.

Another argument may be urged against these doctrines: I allude to the effect of bark. This is a point which very much puzzled the physiological school, and they have accordingly exerted all their ingenuity to explain it away. At first, I believe, they were strongly inclined to deny altogether the specific powers of this remedy; they were subsequently, how-

ever, compelled to subscribe to the fact of its efficacy, which was too notorious to be denied, and they had then to explain how bark could cure a gastro-enteritis. Hard as it was to explain how bark could be instrumental in removing gastro-intestinal inflammation, it was a matter of unavoidable necessity to attempt something like an explanation, in order to maintain the integrity of the physiological doctrine. They therefore set about the task, and endeavoured to show that bark cures ague, or its cause, gastro-enteritis, by substituting one irritation for another. The whole gist of their arguments is founded on this point:—quinine, they say, is a stimulant; ague is the irritation produced by gastro-enteritis. Now it is a fact that stimulants will frequently remove existing irritations; thus, we frequently observe, that blennorrhagia, chronic ophthalmia, and diarrhœa are cured by stimulants. This argument, however, is more specious than solid. There are certainly cases of irritations of mucous surfaces which may be removed by stimulants, but these are cases of *chronic and not of acute disease.* No one would dream of employing stimulants in a case of acute febrile diarrhœa, few would think of applying irritants to an acutely inflamed and painful conjunctiva; it is only when the character of the inflammation alters, and the affection acquires more or less chronicity, that these remedies prove at once serviceable and safe. Now this is not the case in ague. If it depends upon an acute gastro-enteritis, we are, according to this line of argument, to conclude, in the teeth of their other doctrines, that the best mode of curing an acute attack of gastro-enteritis is to stimulate the inflamed mucous surface. Here, you see, we arrive at the argument *ad absurdum.* Another observation on this subject:—In a case of intermittent fever, supposing it to depend on gastro-intestinal irritation, it is a matter of indifference whether you give the bark during the paroxysms, or during the intermissions. Now, it is a matter of experience, that bark will be far more effectual when given during the intervals of apyrexia. Again, if bark cured by producing a new irritation, we ought to see the symptoms of that irritation succeeding the administration of the remedy.

Thus, whether we look to the symptoms, the appearances seen on dissection, or the results of treatment and the efficacy of bark, we must conclude that the morbid state of the digestive system stands in the relation of effect, and not of cause. As far as we can judge of ague, it appears to be some profound alteration of innervation, some affection of the whole system, the nature of which we cannot understand, but the effects of which we perceive in the various derangements of internal organs, by which it is attended. Intermittent fever is not intermittent gastro-enteritis, because dissection reveals various other important lesions, and because it is cured by bark, which has nothing in it calculated to remove acute inflammation. We know that if a patient labouring under ague has acute inflammation of the stomach, bark, so far from curing, will do him a great deal of harm. Bark cannot cure by exciting irritation, because, if it did, it would increase the supposed gastro-enteritis, and we should have more violent symptoms during the intermissions, the time when it is always given, than during the paroxysms. Lastly, there is no analogy between the effect of stimulants on acute and chronic inflammations. What the *modus operandi* of bark is we cannot explain. Many things connected with the phenomena of life in health and disease are, and probably will for ever remain, concealed from human ken. We daily witness the effects of stimulants, but we cannot explain their mode of action. This, however, is no opprobrium to medicine. This is the right way of viewing the subject; part of it is capable of admitting an explanation, the rest constitutes a portion of the inscrutable arcana of nature. It fortunately happens, however, that, for all practical purposes, the knowledge of these occult portions of medical science is as yet comparatively unimportant.

To-morrow, gentlemen, I shall resume the subject of intermittent fever.

LECTURES

ON

MIDWIFERY & THE DISEASES OF WOMEN AND CHILDREN,

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LECTURE III.

Dysmenorrhœa—Menorrhagia.

GENTLEMEN,—In my last lecture I stated that the menstrual periods are generally preceded by slight symptoms, which warn a female of their approach, such as a sensation of weight and fulness about the loins and pelvis, bearing down and aching in the thighs, &c., whereas, in others, the discharge makes its appearance without any of these premonitory symptoms, and the patient has no other guide, as to when she may expect it, than the known regularity of the previous accessions.

In *dysmenorrhœa,* which we are now about to consider, the menstrual periods are preceded and accompanied by such intense suffering as seriously to affect the general health. The time at which the pain comes on varies in different cases; in many the pain precedes the discharge, or else the discharge is exceedingly scanty as long as the pain lasts, but, as the quantity increases to a full flow, a subsidence of the suffering takes place, in these cases the pain will last only a few hours; in other instances, the discharge is more profuse than natural during the whole continuance of

the pain, is apparently expelled in gushes, and is then usually mixed with coagulated blood; in a few more rare cases the pain will only occur in the latter part of the menstrual period, accompanied either with a diminution or an increase of the flow, and ceasing only after every vestige of the discharge has passed off *.

The suffering at the menstrual period is severe, sometimes beyond description; it resembles in intensity the pains of labour, or of abortion, properly so called, for to either the case may be said to have a strong analogy; it usually commences by a slight menstruous discharge, which is pretty suddenly arrested; pain now almost instantly ensues, this is described by women to be of a forcing bearing-down kind, returning at longer or shorter intervals, until a membranous substance, or small coagula, are discharged; if it be a membranous substance it will be found of unequal size, sometimes small, at other times large, and sometimes it resembles the cavity from which it is expelled, at other times it will be broken into many fragments; after the expulsion of this substance the woman enjoys ease, unless there be a fresh production, in which case it requires, for its expulsion, fresh contractile exertions of the uterus. The quantity discharged is very various, sometimes it is small, and other times very abundant, sometimes a portion not much larger than my nail, and again as much as would fill a large tumbler. The period employed for the expulsion of this substance is also various, sometimes requiring but a few hours, at other times several days: the degree of suffering is not always in proportion to the substance expelled, indeed the pain would rather appear to be less when much is discharged, which perhaps is not difficult of explanation †.

All these pains (says Dr. Locock) will vary in degree, for in some severe cases the paroxysms have been so violent, that the patient has rolled upon the bed, or floor, with agony, and, in a few instances, I have noticed severe convulsions, of the character of tetanus, even amounting to regular opisthotonos ‡. The fluid discharged, in healthy menstruation, is essentially different from blood itself; it is a *secretion* from the uterine vessels, and does not possess the property of coagulating. In dysmenorrhœa, on the contrary, not only are coagula of fibrine discharged, from which the red particles are more or less drained, but, in cases where the excitement has been very high, exudations of coagulable lymph take place on the internal surface of the uterus, and these are expelled in the manner, and with the symptoms, above mentioned. Dysmenorrhœa may arise at any period of life at which the menstrual function is performed; it will sometimes exist at the time of puberty, and cease upon marriage; in other instances the first attack is immediately after marriage, and lasts till the patient becomes pregnant; in some it does not appear till after child-birth. It has been often stated, that no woman can become pregnant whilst this disposition to dysmenorrhœa exists, but this is far from being correct, the error arising from the fact that such patients are peculiarly liable to abortion at a very early period, which abortions have been supposed to be merely unusually aggravated attacks of the complaint; nor again, as has been generally considered, is pregnancy a cure for a previously existing dysmenorrhœa, unless by great care and management the first two or three months are safely passed over. It would appear that the immediate cause of this distressing disease is extreme irritability of the uterus, and as it is well known that great irritation is but a step removed from inflammation, it is very probable that, in some cases where a membrane is expelled, inflammation of a peculiar character may be excited; it does not follow as a certainty, that the separation of a coat of fibrine from a mucous surface is the result of decided inflammatory action *

In the treatment of dysmenorrhœa, the general and local abstraction of blood has been, and still continues to be, much recommended, from the notion that the severe pain which the patient suffers, and the discharge of those fibrinous coats of the uterus and portions of membrane resembling decidua, are the result of inflammation; the blood, however, seldom shows the buffy coat; in fact, the disease is sometimes met with under circumstances which almost preclude the possibility of inflammation. The only symptom of inflammation which appears is pain; the pulse is merely quickened during the immediate paroxysm, at which time the skin is hot, or the face flushed, frequently, indeed, the skin is damp and cold, and the face pallid.

By the character of the constitutions usually affected, by the spasmodic nature of the pain, and by the success of a very opposite class of remedies, it would appear that the disease is rarely inflammatory, perhaps never purely so, but that it arises from a peculiarly irritable condition of the uterine organs. On this principle the treatment is twofold, first, to relieve the immediate pain during the menstrual period; secondly, to regulate the general health in the intervals. For the first purpose, opium is the best remedy where it can be borne, and particularly when combined with ipecacuanha and with camphor, in doses of four to ten grains. Immediately before an expected attack the bowels should be opened by a mild purgative or a warm water injection; the patient may also put the feet in warm water, or sit in a warm hip-bath; at this time, should the pulse be full and frequent, the countenance flushed, and general plethora prevail, the local abstraction of

* Locock, Cyclopæd. of Pract. Med.
† Dewees on Diseases of Women.
‡ Locock, op. cit.

* Locock, op. cit.

blood, by cupping on the loins, or by leeches to the pudenda or groins, might be advisable *. The most efficient and uniformly certain remedy for this purpose (says Dr. Dewees) is camphor in sufficient doses. The following is the formula I generally use:—℞. Camphoræ ℈j., sp. vin. rect. q. s., ft. pulv., adde gum. acaciæ ʒj., sacc. albi q. s., aq. cinnam. ʒj., ℿ.; one half of this draught is to be given the instant pain is experienced, and if it be not relieved in an hour or two, the other half is to be given. This quantity, however, is not always sufficient to subdue pain; in this case let the mixture be repeated, or the same quantity of camphor may be finely powdered and given in ten grain doses every hour, entangled in a little syrup of any kind, until relief is procured. Sometimes the stomach is much deranged in this complaint, and will suffer nothing to remain upon it; when this happens, I order thirty or forty grains of camphor, to be rubbed down with a few drops of spirit of wine to a very fine powder, ʒj. of laudanum, and ʒiij. of thin starch or flax-seed tea as an injection; should this be too suddenly discharged, or fail in giving relief, it may be repeated †. Besides the warm hip-bath, a variety of local applications may be used with considerable relief to the patient, such as hot fomentations, mustard cataplasms, or belladonna plasters to the sacrum, warm starch or mucilage injections, containing opium, belladonna, or conium, may be thrown up the vagina or into the rectum, as recommended by Dr. Dewees. In the intervals of the attacks our main object will be to restore the general health, and by increasing the strength of the system thereby to diminish its irritability. A mild course of tonic medicines, especially chalybeates, with attention to the state of the bowels, will be necessary, in fact, much the same treatment which I have recommended in Amenorrhœa. We may begin the use of iron in the form of vinum ferri, combined with aq. cinnamomi and infusum quassiæ, or mild doses of the sulphate, combined with ext. colocyth. comp. and pil. saponis c. opio, as recommended by my friend Dr. Locock; and thus having gradually accustomed the stomach to these mild forms of chalybeate medicines, we may thus proceed to the more powerful preparations, viz. the pil. ferri comp. and mist. ferri comp. of the London Pharmacopœia.

A residence at any of the chalybeate springs of this country or on the Continent is very desirable, as not only the air, but also the constant active exercise which the patient is excited to take when residing at such places, are highly conducive to the improvement of her health. Guaiacum has been much recommended by Dr. Dewees as a remedy in dysmenorrhœa, who considers it as the most successful of any. The same fact has also been observed by the late Dr. Gooch and by Dr. Locock, but chiefly by these gentlemen, where the disease existed with a rheumatic state of the system. Dr. Dewees uses a peculiar formula, differing in some degree from that of the Pharmacopœia. In a pint of alcohol he digests for a few days ʒ iv. of guaiacum with ʒ jss. of carb. sodæ or potass. and ʒ j. of pulv. pimentæ; the volatile spirit of ammonia is to be added pro re natâ, in the proportion of ʒ j.–ij. to every ʒ iv. of the tincture, according to the state of the system. "Perseverance," he says, "for two or three months is oftentimes necessary. I think I have observed that this medicine is more decidedly useful where the first menstrual period after its use is more than usually severe. This has been uniformly found a favourable sign. Though the tincture of guaiacum has been generally successful, it has not been uniformly so. In two instances where it failed the ext. cicutæ succeeded; and in another, where it had not been successful, tincture of cantharides gave perfect relief *."

Dr. Mackintosh of Edinburgh considers that in many cases the cause of dysmenorrhœa is a mechanical one, namely, that the menses are prevented having a free escape by the unusual smallness of the os uteri, which has been occasionally found scarcely large enough to admit a bristle. "I am far," says he, "from alleging, however, that dysmenorrhœa is *always* produced by a small os uteri; on the contrary, I believe it may occasionally depend on inflammation of the lining membrane of the uterus, as well as on inflammation in the substance of the cervix uteri, and on the encroachment of tumours diminishing the calibre of the passage through the cervix. I only maintain, that the condition of the os uteri above described accounts satisfactorily for many cases of dysmenorrhœa." Dr. Mackintosh then proceeds to state that he has successfully treated a number of cases by mechanical dilatation of the os uteri, and in several instances impregnation has subsequently taken place. The subject is curious, and the facts brought forward by Dr. Mackintosh are important; and, although there can be no doubt but that a number of cases do *not* depend upon an unusually small os uteri, yet the possibility of its occurrence should be borne in mind, and where the symptoms prove very obstinate, an examination should be instituted if possible.

Gentlemen, I now come to the consideration of *Menorrhagia*, or morbidly profuse menstruation.

The varieties of menstruation are so great, not only as to the interval and duration of the periods, but also as respects the quantity discharged, that it becomes exceedingly difficult to fix the precise limits of healthy menstruation, beyond which it becomes morbidly sparing or profuse. In saying this, I do not allude either to the varieties of this function which

* Locock, op. cit.

† Dewees on Diseases of Women.

* Dewees on Diseases of Females.

depend upon climate or peculiar constitution, but to those which are observed to occur in the same individual. I might almost say that no two women menstruate precisely alike, for the intervals at which the catamenia appear, the duration of the discharge, and the quantity secreted, are subject to endless varieties even in the same climate, depending on age, mode of life, habit of body, state of health, &c. To apply the term, therefore, of *menorrhagia* to profuse menstruation, merely because the quantity discharged exceeds the usual bounds, or because its duration is unusually long, or the intervals unusually short, would be evidently objectionable, because what would rapidly prove destructive in one woman is nothing more than the customary evacuation to another, the diminution or suppression of which would be equally injurious to her health.

The character of the menstrual fluid is well known to be that it does not coagulate; but I am unable to say how far the catamenia may continue to be increased in a patient beyond the accustomed quantity and yet preserve its peculiar character. Certain it is, that in almost every case of menorrhagia, where the discharge is at all profuse, it appears to consist entirely of blood, and coagulates as freely as in common uterine hæmorrhage; hence I am inclined to think that the nice distinctions which have been attempted to be drawn by some authors between menorrhagia and uterine hæmorrhage, are neither correct nor practical, in which opinion I am borne out by Dr. Locock, in his excellent article on Menorrhagia, in the Cyclopædia of Practical Medicine. The analogy of other secretions also justifies this opinion. It is well known, that the secretions of the liver, the intestinal canal, lungs, &c. become remarkably altered, not only in quantity but also in quality, whenever the organ by which they are formed is affected by inflammation, and that by a continuance of this state the character of these secretions frequently becomes permanently changed. In like manner, also, is it with the uterus; nor can I conceive, that in menorrhagia, which is nothing more or less than a morbid condition of the uterine secretion, we are justified in considering the catamenia merely *increased in quantity*, and not also materially *altered in its qualities*.

Menorrhagia may occur in very opposite states of the system, and has therefore been divided into active and passive; the former arising from too great activity in the vessels of the uterus, the latter from want of tone in their secreting orifices. Either of these states may exist in a plethoric habit of body, or in one of great debility, but, in general, the local is of the same character with the constitution in the same individual *.

In this manner the health becomes gradually impaired, and the disease passes from the active to the chronic state.

An attack of active menorrhagia is generally preceded, for a few days, by a sensation of fulness and weight about the pelvis; in fact, the usual precursory symptoms of menstruation are present only in a more acute form; there is a sense of heat and throbbing in the situation of the uterus; the circulation is quickened, the pulse more or less hard, thirst, dry mouth, heat and pain of head, or even vertigo. When the discharge commences it usually appears suddenly, and with considerable violence, coming in gushes of pure blood, and therefore with all the violence of uterine hæmorrhage, especially in abortion. The duration of the first attack is variable,—it may last only an hour or two with violence, and then gradually cease, leaving the patient cooler, lighter, and more comfortable. It may thus go off, but in more aggravated cases the flow still proceeds in equal or increased quantity, and lasts for several days, occasionally subdued, but again breaking forth upon the slightest exertion, till, at the end of the period, the patient is left weak and languid, with a feeble pulse and pale countenance. By the time of the recurrence of a monthly period the individual is perhaps restored to the previous state of health, but the same train of circumstances is again renewed with perhaps increased severity, and the complaint rarely lasts long without the number of days intervening between the periods being rapidly diminished, till at last scarcely one period is over before the next approaches. The condition then quickly becomes one of passive menorrhagia, the symptoms of which are more formidable, and the treatment more difficult *.

When once the system has been lowered to a certain degree by repeated losses of blood, a variety of symptoms arise, depending on the state of anæmia. The patient suffers from intense headach, accompanied with tinnitus aurium, and occasional loss of vision; her nights are passed in a restless and wakeful state, or in unrefreshing slumbers, disturbed by frightful dreams, occasionally amounting almost to actual delirium; the extremities are cold; the skin pale, clammy, and easily excited to profuse perspiration, without a corresponding increase in the heat of the surface; the spirits are much depressed, and she experiences strange associations of ideas, over which her mind appears to have no control. "If this goes on, I shall lose my senses," is a remark not uncommonly made by patients under these circumstances, and the apprehension of such a result is a source of much wretchedness. The digestion is impaired, and in extreme cases the stomach becomes so irritable as to be made to bear food with great difficulty; the bowels are easily deranged,—in fact, it becomes nearly impossible to keep them from falling into one extreme or the other, and diarrhœa is a frequent result which only sinks the patient still further. From the relaxed state of the uterine and vaginal vessels,

* Locock, op. cit.

* Locock, op. cit.

leucorrhœa is almost constantly present during the intervals, and sometimes to a very profuse degree. The depressed state of mind acts most unfavourably upon the disease; and I have frequently seen a fit of tears or low spirits bring on a return of the discharge. The feet and legs become œdematous, and anasarca gradually extends to other parts of the body; the respiration becomes impeded; symptoms of ascites and hydrothorax appear, which soon terminate the patient's life.

The *causes* of menorrhagia are various, and the character of the discharge will vary accordingly. The active menorrhagia is found to occur in plethoric habits, often apparently as a natural relief to the overloaded system, but aggravated by luxurious living, a sedentary and indolent life, hot rooms, and also by very violent exercise, or any other fatiguing exertion.

The passive menorrhagia, on the other hand, is caused by all those circumstances which lower the bodily powers, and weaken the action of the heart and arteries; but in both of these cases there are local causes which peculiarly tend to direct the mischief to the uterus, and increase the circulation in the vessels of that organ, leading to an increased discharge, whether that be the immediate effect of excess of activity, or the diminished power of retention. Such are blows and falls, or any other local violence, frequent and recent abortion, leucorrhœa, over-indulgence in sexual intercourse, irritation in the bladder, diarrhœa, tenesmus, piles, ascarides, or scybala in the rectum, or even habitual costiveness *.

Besides the above-mentioned causes, menorrhagia may be dependent upon some organic disease, as polypus, where it has attained a certain size, and has passed through the os uteri which now girds it like a ring, and prevents the free return of the venous circulation. The various hæmatomatous and carcinomatous degenerations of structure, to which the uterus is liable, but especially the former, which are commonly known under the name of fungus hæmatodes, are accompanied by profuse discharges of blood; ulcerations, also, of the os and cervix uteri produce the same results; but, under these circumstances, the discharge can be scarcely called menorrhagia, as it proceeds from a ruptured vessel, not from the mouths of those vessels which open into the cavity of the uterus, and which, in a state of health, secrete the menstrual fluid; but, in cases where the fundus has been *inverted*, the discharge proceeds from the orifices of these vessels, and mostly at the menstrual periods, from which source, also, is derived the profuse leucorrhœa which is present during the intervals.

All those circumstances which tend to produce hæmorrhoidal congestion, will, in constitutions disposed to menorrhagia, prove so many causes of it. Thus, where the bowels are much loaded with a large collection of solid fæces, the ascending cava and iliac veins are pressed upon; and the obstruction to the current of blood, returning to the pelvic organs, produces considerable congestion in these parts. Thus, occasionally, we also find, as Dr. Locock has observed, that chronic menorrhagia is connected with organic or functional disease of the hepatic system; and when it is recollected how notoriously inattentive women are to the state of their bowels, and what enormous accumulations of fæcal matter are allowed to take place, it may be easily supposed to what degree the abdominal circulation must become obstructed, and how powerfully such obstruction must act in producing congestion of the pelvic viscera.

* Locock, op. cit.

CLINICAL LECTURES ON SURGERY,

DELIVERED AT

THE HOTEL-DIEU, PARIS,

BY BARON DUPUYTREN,

PRINCIPAL SURGEON OF THAT HOSPITAL.

Corrected by himself.

Wounds of the Face—Difference of Wounds in different regions of the Face—Wounds of the Eye—Treatment of Wounds of the Inferior Maxillary Bone—Wounds of the Ears—Wounds of the Antrum—Wounds of the Neck—Different Effects in the different regions—Wounds of the Shoulder-joint—Danger of—Wounds of the Arm and Fore-arm—Elbow-joint—Wounds of the Chest—Commotion of the Heart and Lungs—Consecutive Hæmorrhage in Wounds of the Chest—Difficulty of Diagnosis, &c.

Gentlemen,—*Wounds of the face* are in general but of slight danger. We have seen cases in which nearly the whole of the face has been destroyed by bullets, and nevertheless the patients have speedily recovered. Many of those at present in the Hôpital des Invalides offer examples of this description. But sometimes they terminate unfavourably, in consequence of the development of consecutive symptoms. A citizen wounded in July by a grape-shot had nearly the whole of both the superior and inferior maxillary bones broken away, and he died from cerebral symptoms. Many other Parisians at the same period had the inferior maxillary bone fractured; some recovered, others perished, in consequence of the frequent hæmorrhages that supervened, or else they were carried off from inflammation of the brain or chest. Another dangerous consequence from these wounds is, the abundant and fœtid suppuration which constantly becomes mixed with the saliva, and is taken with it and different aliments into the stomach, there giving rise to various disorders which at length affect the whole system. This kind of patients are the objects of pity to all

who see them, and of disgust and horror to themselves. We will next examine the difference of wounds in the different regions of the face.

It is as well, however, first to remark, that *wounds of the nose* give a most hideous appearance to the countenance, therefore every means should be adopted, as speedily as possible, to prevent such a deformity. Should there be a division, the divided walls should be kept in apposition, and retained by the aid of sutures. If the base of the organ has been destroyed by the wound, art is of but little avail, for the loss of substance cannot be repaired. If the nose has been broken, and the bones are indented, the deformity is very great, but it may be somewhat lessened by introducing some lint into the nostrils, by means of a pair of forceps.

Bullets received directly in the *orbit* frequently produce great deformity, and often cause sudden death. A pistol discharged close produces the same effects as in the mouth, both from the dilatation of air, and by the projectile. The eyelids and the integuments of the orbit are lacerated, the bone broken, and the eye sometimes hangs on the cheek. A case similar to this presented itself to our notice in July; the base of the orbit was broken to splinters, the eye was extirpated, the eyelids approached one to the other, and the patient recovered. Shot, if lodged in the thickness of the eyelids, do not produce any severe symptoms; they may either be left or extracted; if they pass obliquely in the cornea or sclerotica, an albugo of greater or less extent is formed. If they strike in a perpendicular direction, they traverse these membranes, and are either lodged in the interior or globe of the eye, where it is impossible to be certain of their presence, and dangerous to attempt to extract them, unless they are lodged in the anterior chamber. In this latter case, either before or after inflammation they may be perceived and extracted.

In cases even where there is the least danger, the wound from the shot causes loss of vision, deformation of the iris, and obliteration of the pupil. But frequently, however, acute pains supervene, which from all remedies are not alleviated, inflammation and enormous tumefaction result, and the pains become more intense. At this period, it is requisite to make a crucial incision in the organ, or else it will burst, and the liquids that it contains make their exit. Frequently in these cases, the inflammation is transmitted, through the medium of the optic nerve, to the brain, and death is the result.

A woman received a ball in the left cheek, near the commissure of the mouth, the projectile after traversing the skin, the masseter, and the parotid gland, made its exit immediately in front of the ear; although the parotid was injured, and the ball passed through it, no salivary fistula supervened; wounds inflicted by steel weapons, on the contrary, give rise, in almost every case, to salivary fistulæ. The bullet produces in its course a thick eschar, which forms a barrier to the salivary discharge, precisely similar to that which prevents hæmorrhage from lacerated wounds. This eschar is not destroyed till after the inflammation has taken place, then new granulations spring up, which close the extremities of the salivary canals. In this case the means adopted by us corresponds to the process of nature, for the salivary fistula becomes destroyed *by cauterisation*.

It will be needless for me to return to wounds inflicted by pistols in the mouth, as I have already given a lengthy detail of their effects. I mentioned to you their action from dilatation of air, the action of powder, and that of the projectile, on the pharynx, soft palate, tongue, and inferior maxillary bone, &c.

The number that receive wounds of the inferior maxillary bone, are very great. If the symphysis is even carried away, the wound is less serious than if the ball had broken the other part of the body and branches of the bone. Two patients wounded in this part died at the Hotel Dieu, one from inflammation of the brain, when we thought him out of danger, the other from hæmorrhage and erysipelas; many others, again, entirely recovered. The danger, in the first place, arises from the compound nature of the wound, from the lesion of numerous nerves, from the difficulty in removing the splinters and bone, afterwards from the inflammation and fœtid suppuration, and from the consecutive diarrhœa, &c.

The best recommendation I can give you of treating such wounds, is the following. An incision should be made from the lower lip to the os hyoides, and the edges of this wound be widely separated, the same as in *amputation of the inferior maxillary bone;* then take away all the fragments of bone, and if they are very considerable, with a saw divide the bone above the splintered part; after this part of the operation, bring the edges of the wound together, but take care to leave a tolerable large opening for the free discharge of pus. This proceeding is equally applicable to wounds of the superior articulation of the humerus, the splinters of which, by making a large flap from the deltoid, may be removed; thus all consecutive symptoms will be diminished, and the limb preserved.

Wounds of the ears present some peculiar characters which will not be uninteresting. By a sudden report from a cannon, the tympanum is frequently lacerated; the result is hæmorrhage both from the ear and throat; the primary effects of the discharge of cannons are well known, especially in young soldiers, to produce spasms of the chest, slight colicky pains, diarrhœa, &c. Rupture of the membranum tympani causes deafness; frequently the noise of cannons produces only dulness of hearing; the faculty that some subjects possess of being able to pass the smoke of tobacco

through the ears, is from laceration of this tympanitic membrane. A bullet striking this organ, its effects are not limited to it, and in almost every case it proves fatal; however a bullet rarely strikes simply this organ, but the surrounding parts are likewise wounded.

Wounds of the organ of hearing are generally followed by fistulæ, and suppuration either from the ear or mastoid process, which indicates either the presence of the projectile, or bony splinters, and these symptoms are not checked until the foreign body or bodies are extracted. Deafness may be produced by the entrance of a shot in the ear, but most frequently these projectiles are lodged in some external part of the ear. A sword may cut off the entire ear, or may only partially divide it; in this case it is necessary to re-apply the part, and gain union if possible. Wounds of this organ from pointed instruments, are those most liable to erysipelas.

We will next consider wounds of the *superior maxillary bone*, of which the two following are remarkable examples.

A young man, in 1830, received a wound at the base of the left side of the nose, which traversed obliquely the face, and passed out on the right side of his neck; he perfectly recovered. He pretended that his vision was diminished, and that he had lost all sensation of smelling. It is certain that he had paralysis of the right side of his face, he could speak, and move his tongue. In the other wounded, the ball perforated the right malar bone, and made its exit at the opposite parotidian region. The subject of this case was a child 15 years of age; he had merely slight swelling of the malar region, the whole of his senses remained untouched.

We will not insist on the consecutive serious symptoms from bullets and Biscaian balls in this region, such as suppuration, &c.

The balls may penetrate and lodge in the different sinuses. When the patient moves in these cases, the ball rolls about, and the patient feels these rotatory movements. The indication in these cases is to enlarge the opening and extract the projectile. In 1814, a colonel had his masseter muscle and parotid gland destroyed by a ball, which lodged in the antrum; the tumefaction produced was enormous (bleeding, &c.); after the prevalence of inflammation, the right nostril became obstructed, and the sinus was extremely painful. These symptoms were supposed to arise from a splinter of bone, which, in fact, was taken away; however, after this operation a ball was extracted, the anterior wall of the antrum was raised, and the ball extracted, was found to be deformed and uneven. The cheeks may be wounded either separately or together; when the ball has traversed from one side to the other, the teeth are in generally broken.

Wounds of the neck are very numerous, and frequently attended with extreme danger. The neck may be divided into four regions, and this division is not scholastic. In the anterior region, the larynx, trachea, and pharynx may be attacked, on the sides, large vessels and nerves; in the lateral regions, nerves going to form the brachial plexus, and voluminous arteries (vertebral); in the posterior region, strong and powerful muscles, symptoms from which are less dangerous; in the centre, the vertebral column, and spinal marrow, wounds of which are extremely dangerous, paraplegia, sudden or consecutive death. The neck is protected by garments, especially in military men. For this reason, in July, the soldiers were much less frequently and less dangerously wounded than the citizens, who fought for the most part quite uncovered, either from custom, or in consequence of the excessive heat. The treatment in these cases should be most active. In 1814, a case came under my notice, in which the base of the neck was traversed from one side to the other; from the wound resulted both primitive and consecutive hæmorrhage, and the patient died. Another patient, whose larynx was traversed, died at the epoch in which inflammation came on; there was great tumefaction of both the fibrous and cellular parts; the respiration was so difficult, that all his strength was employed in effecting it. On the autopsy, the cartilages of the larynx were found smashed and perforated, and there was an inflammatory œdema of the interior of the larynx. If the patient had got well, his voice would have been lost, and his respiration carried on with difficulty, in consequence of the retraction of the parts.

In July, a man, more than 60 years of age, received a ball in the upper and anterior part of the trachea; the opening was perfectly round and unique; no other opening existed for the exit of the ball. I entertained some hopes of being able to save him, but when inflammation came on, swelling supervened, his breathing became short and painful, and death was the termination.

Wounds inflicted by sharp instruments generally take place on the anterior part of the neck, especially in suicides. Many of them, from their depth, or from wounding the carotids, prove fatal; but sometimes these arteries are spared, in consequence of their yielding mobility, and pushed into the midst of the surrounding cellular tissue, so as to lie on the anterior part of the bodies of the cervical vertebræ. Unless, in cases of the division of these arteries, you are there at the moment of the accident, death is inevitable, but if on the spot, a ligature must immediately be applied to each.

About fifteen or twenty years ago, whilst a medical student was bathing with his companions, he was overwhelmed by the water, and asphyxiated. The operation for tracheotomy was thought improper; the carotid or subclavian artery was opened: the danger from such lesion was great, and without a remedy. We may have also the pharynx wounded above the os hyoides and the larynx

below it, both of which would give passage to the food and air.

The wound should be closed by keeping the patient's head flexed towards the chest by means of a bandage, and the patient rendered as comfortable as possible in this position by means of pillows. But there are inconveniences attending this method. If the head is approached too near the chest, the lips of the wound are pressed inwards, the skin of one edge of the wound comes in contact with the skin of the other, and reunion cannot take place; or else the inferior lip of the wound is carried backwards, forms thus the office of a valve, and determines asphyxia. From the origin of these inconveniences, we have preferred the employment of the suture, taking care to leave a passage for the exit of the effused pus or blood. Some months ago, in a wound of this kind, the suture, by forming an obstacle to the effused fluids, produced cough and urgent symptoms, a few stitches of the suture were divided, the symptoms immediately ceased, and the patient got well.

In wounds of the lateral regions of the neck, the muscles, and especially the roots of numerous nerves, which form the cervical and brachial plexuses, may be wounded. These wounds are dangerous, but, if superficial, the danger is but slight.

Lesion of nerves is followed by symptoms of pain, and the paralysis is limited to the muscles supplied by them. At St. Cloud, there is a person, from lesion of the nerves, who can neither carry his hand backwards nor forwards, and he complains of numbness of this extremity. Incisions ought to be made in this region in the course of the artery and nerves. The vertebral artery and branches of the carotid may also be wounded in this region; in these cases we have primitive hæmorrhage, which is frequently arrested, or consecutive, which generally carries off the patient. Ligature of the primitive carotid does not always prevent a return of the hæmorrhage, in consequence of the free anastomoses with the carotid of the opposite side. Should then the tying of the artery be abstained from?—if possible both extremities should be tied, for though these means do not always succeed, yet it is the only thing that can be done. The inflammatory engorgement of the surrounding parts is frequently favourable in checking the hæmorrhage.

Wounds in the posterior part of the neck incur the muscles, and, sometimes, the spinous processes; if neither the large vessels nor spinal marrow are affected, the wounds are but slightly dangerous.

Wounds of the Shoulders are, again, very numerous. The shoulder, in fact, in combats, is but little protected, consequently it very frequently becomes the seat of injury. Superficial wounds of the shoulder are but of slight importance; deep wounds, on the contrary, are extremely dangerous. Here, also, it is necessary to divide it into a number of regions. Thus, superficial wounds may attack the anterior, posterior, superior, and inferior regions, the axilla, &c.

If the superior part has been struck superficially from before backwards, and a gutter is formed which interests only the skin, the cure is much more prolonged in this case than the same kind of wound in any other part of the body. The following is the anatomical reason of this fact:—The shoulder is one of the parts the most mobile in the body; it has the power of moving in every direction; the constant twitchings induced are opposed to cicatrisation, or, when the cicatrix has been effected, laceration is frequently produced. Gutter-like wounds, when a little deeper inflicted, from behind forwards, or from before backwards, embrace the trapezius muscle; in most cases then the cicatrix is adherent.

Deeper wounds still in this part, and which are directed from before backwards, attack the vessels and nerves, and consequently give rise to hæmorrhages, partial paralysis, pains, stiffness of muscles, &c. Wounds of the axilla, even of the slightest depth, are commonly of the utmost danger, in consequence of lesion of the vessels and nerves. If the brachial, or especially the axillary, artery is attacked, nearly always, either from primitive or consecutive hæmorrhage, the patient dies. Wounds of the posterior part of the shoulder are very numerous. If the skin only in this region be affected, no danger results; if the muscles are wounded, the cure is prolonged, but there exists but slight danger. Wounds of the fossæ of the scapula are also of but slight danger, if the spinous process or crest of the scapula be not wounded; the splinters resulting must be extracted. If the muscles, however, be attacked, or the trapezius cut at its insertion, the movements of this part remain difficult.

In the stump of a shoulder, wounds are of greater severity. A woman had the deltoid carried away with the head of the humerus; some hope was entertained of her recovery, but she died from extensive inflammation and suppuration of the chest.

If the wound is higher up, the acromium of the scapula is generally affected. In a case that I have seen, the ball passed between the skin and this apophysis. In 1814, we frequently saw it separated, contused, or broken in splinters, &c. In July, a young man received, in the anterior part of his shoulder, a projectile which passed between the apophysis and the head of the humerus, and then made its exit from the back; no symptoms of importance supervened, neither was any bone fractured, and the patient perfectly recovered. A similar case was observed at St. Cloud's; but in this case the acromion was slightly interested.

In the anterior region wounds are more dangerous. This region offers, in fact, a direct surface, whilst, on the contrary, the others present an oblique direction. Frequently the balls are lost in the thickness of

the shoulder, and affect the bone and articulation. Whether the ball remains in the part or not there is great danger. If it is lost in the parts, pains supervene, inflammation and abundant suppuration ensue. Wounds of the deeper parts are rendered dangerous from the greater or less extent of injury of the scapulo-humeral articulation. If the coracoid, acromium process, or scapula is attacked, there result inflammation, strangulation, suppuration, and fistula. Large incisions should then be had recourse to, the different abscesses opened, bleedings, short diet, &c.; afterwards employ, to counteract the stiffness of movements and pains, baths, cold affusion, &c., &c.

If this, one of the largest articulations, is attacked, surrounded as it is by muscles, tendons, and aponeurotic planes, aggravated by splinters of bone, inflamed, suppurating, and full of pus, you may imagine the greatness of the danger; inflammation and strangulation oppose the free exit of pus, in spite of large openings; and how can the splinters be extracted? Nevertheless, if they remain, they determine symptoms of pain, fever, and reabsorption. It is of the greatest importance to know, then, what is the condition of the head of the humerus. If it is only perforated, the danger is less; but more frequently it is broken in a great number of fragments; these foreign bodies produce the suppuration, and consequently the prostration, sweats, and diarrhœa; the suppuration becomes then altered. If possible, then, these symptoms should be prevented by treatment of primitive symptoms.

If the head of the bone is slightly fractured the parts should be divided to as great an extent as possible, taking care not to injure the tendons, nerves, or vessels; the loose splinters of bone taken away. In those cases, in which the head of the bone is much broken, the disarticulation of the bone is recommended, but it is difficult to get the patients to agree to it, and in all cases this operation is not practicable. Those wounded, in fact, have not the least idea of the danger of the wound, and they think it unreasonble to lose a limb for a simple opening. If possible the patients should be forced to submit to the operation, for instead of having five or six chances from death they have only one. But is it necessary to take away the whole of the limb? I am convinced that, in this case, treatment analogous to that which is applied in the articulation of the inferior maxillary bone could be advantageously employed, which is to make a large incision, uncover, and take away the splinters of bone.

Wounds of the arm are less dangerous, and for the following reasons: — 1st. They are nearer the extremities and further from the centre. 2nd. The anatomical composition of the arm explains another difference; cylindrical, less voluminous, furnished beneath the skin with a single aponeurosis and sub-cutaneous cellular tissue, the division of the part is more easy, and unattended by bad symptoms. 3rd. All the tendinous parts are parallel to its axis, so that the extent of incisions may be continued without danger. 4th. The bone is unique, the splinters can be more easily destroyed, and are in most parts nearer the surface. Also the most serious wounds of the arm seldom require amputation, and when it becomes necessary it is generally owing to lesion of the elbow-joint. But the arm itself gives passage to voluminous vessels and large nerves, which may become wounded, the brachial artery, median, cubital, and radial nerves may be divided, different kinds of paralysis and hæmorrhage supervene. In the thigh the nerves are much less exposed.

Wounds, from pointed instruments in the arm are very rare, and offer no other danger than strangulation. Sometimes, according to their duration, they are complicated with lesion of the artery or vein; at least twenty arterial venous aneurisms I have seen arise from this cause. Wounds of the nerves determine pains of acute and long duration.

Wounds from cutting instruments have effects more serious; sometimes the bone itself is divided, though rare; where this circumstance takes place it is exceedingly dangerous. More frequently, however, the bone resists the cutting instrument; if the arteries and nerves are cut at the same time, amputation is of absolute necessity.

Wounds inflicted from shot are of importance only when they wound either the arteries or nerves. As to balls they may strike the different regions; if the anterior region is traversed the lesion is but slight, as we have only affected the skin, cellular tissue, fascia of arm, belly of the biceps, and brachial anticus; frequently, also, the bone is bruised. If the radial nerve is wounded there is loss of sensation and movement of the corresponding part of the hand, so that it can neither be extended nor supinated. If the wound is on the internal part of the arm the danger is great, in consequence of the vessels and nerves.

A man received a ball from before backwards on the superior and internal part of the arm, no nerve was wounded, for he neither suffered from loss of sensation nor movement, but violent hæmorrhage supervened, and it was arrested by a ligature; at the present day no beatings are perceptible either in the brachial, radial, or cubital arteries. The vessels are full but do not beat, the pulsations may return by means of the anastomosis. A question here naturally presents itself; are nerves that have been divided capable of being re-united? I have seen twice the radial nerve cut by a sharp instrument; sensibility and movement returned in the course of two years, but in these cases the division was complete, but without loss of substance. We know that there is a great disposition in nerves to cross one another, and thus sensation and movement may be propagated by this cicatrix. In cases of gun-shot wounds I have no fact to prove

this possibility; I do not affirm, however, that it may not be met with.

Wounds of the posterior part of the arm are but of slight importance. From bullets, or balls from larger guns, they are more serious, nevertheless if the soft parts are alone injured they do not require amputation.

If the bone is also injured the danger is then increased; most frequently the bone is broken in fragments; in these cases, especially if the nervous, soft, and other parts are lacerated, the danger is extreme, nevertheless they offer less dangers than the others, and in general do not require amputation, unless the nerves and vessels are both destroyed, or when a great quantity of osseous or soft parts is carried off.

The conclusion drawn from all that I have said is, that, if in wounds which interest other parts, the limb require speedy amputation, it is necessary to well consider before amputating for wounds in the arm. Amputation is indicated, on the contrary, in the case of a wound from a bullet which has nearly detached the arm, so that a flap cannot cover up the considerable number of vessels and nerves.

When the articulation of the elbow-joint is much exposed, when the osseous surfaces are jammed, amputation of the arm is necessary, and nothing can be obtained by deferring it. If the bones of the fore-arm, carpus or metacarpus, are struck by a ball and broken in pieces, the soft parts lacerated, and the arteries opened, amputation above the injured part is necessary, and it is to be recollected that these parts are endowed with an exquisite sensibility; inflammation speedily takes place, and is accompanied with gangrene, and in the greater number of cases, where endeavours are made to preserve the limb, death is the result. Wounds of the fingers also require primitive operation. It is in wounds of these organs that we see tetanus so frequently manifest itself.

Wounds of the chest, with penetration of the projectile into the organs that are contained in its cavity, are very common; it is these kinds of wounds that are frequently found in those who have died on the field of battle. Their frequency and danger are evidently owing to the volume of this region, to the raised position, and to the importance of the organs wounded. The lungs, heart, or large vessels are rarely attacked without the patient feeling an immediate suffocation, or sudden fatal hæmorrhage. Those who receive wounds of this kind generally fall towards the blow received; they appear dead; blood flows from the wound and from the mouth; if respiration continues it is short, laborious, checked by clots of blood; countenance pale, discomposed, covered with a cold perspiration; frequently the patient is for some time in a state of dead stupor, which terminates only by death. If life is prolonged, the air, in passing to and from the wound, becomes infiltrated between the sub-cutaneous cellular and intermuscular tissues, and frequently, in the space of a short time, determines emphysema of the whole body; individuals thus attacked acquire at times an enormous size. Many wounded in 1830 presented to us examples of this kind.

If even the ball strikes only the walls of the thorax, without penetrating into its cavity, it constantly produces a commotion, which affects more or less the respiratory organs. Frequently this contusion gives rise to a spitting of blood, which must not be considered to arise from a penetrating wound. If the projectile falls on one rib it is generally fractured, and the extremities of the fractured bone tear the pleura, which makes the wound extremely dangerous. It happens also sometimes that a ball traverses different parts of the chest without wounding the lungs. All these cases, and many others, require, on the part of the surgeon, a very minute examination, much skill, and rectitude in judgment. Further, your diagnosis of a lesion of the lung depends much more on the nature of the symptoms than the external seat of the injury, and it is by the symptoms that you must be guided.

Fractures of the ribs, or other bones which compose the walls of the chest, add a great addition to the nature of the wound. You have seen cases in the wards of this hospital in which there has been fracture of the ribs without lesion of the lungs: they have speedily died from inflammatory symptoms, which active bleeding has not been able to prevent or appease. In others, on the contrary, a cure has been effected, in wounds of a serious nature, of the respiratory organs. This difference results from the mobility of the osseous walls, mobility which, as I have previously said, keeps up a constant irritation of the neighbouring tissues, and developes an inflammation, which is propagated to the internal organs.

Bullets or large projectiles may produce on the chest, as well as on the stomach and limbs, all the effects of contusion in the fourth degree. These phenomena take place when the projectile strikes obliquely the walls of this cavity. The viscera contained in it are more or less contused, torn, or disorganised; the heart and lung softened, frequently without there existing the least external laceration, or the least trace of lesion. Many military surgeons, on autopsy, have met with this kind of disorder, produced from the same circumstances. When there is a bruising, all the parts are reduced into an heterogeneous mass, the organisation is destroyed, and life of this part extinct; in fact, death nearly always takes place immediately. However, individuals have been observed to survive a greater or less length of time, and a few have become imperfectly cured; nearly the whole die from consecutive symptoms. These dangerous disorders, I have said, may exist with or without alteration of the skin. There are, nevertheless, more chances of cure when the abscess from the shattered parts has no external communication with the air.

One of the most serious symptoms resulting from wounds of the chest consists of internal hæmorrhage, arising from lesion of one of the large vessels. The danger of these hæmorrhages depends not so much on the quantity of blood that is discharged as upon the effects they produce — consecutive inflammation, which, in these organs, is always very rapid, and the effusion consequent upon the inflammation. The hæmorrhages are at all times difficult to detect, and are generally discovered from the symptoms produced; but it is always difficult to know whether it is a vein or artery that is wounded. The most prominent symptoms of hæmorrhage are, great suffocation, extreme anxiety, faintness, paleness of countenance, alteration of features, small wiry pulse, a slight cough; and, when the effusion is considerable, there is dilatation of the side of the thorax in which it exists, a widening and elevation of the ribs, a shock of the liquid against the thoracic walls whenever the patient changes his position,—a shock which is distinguished by auscultation, and which, even, is appreciable to the wounded. The first indication in these cases is, if practicable, to place a ligature around the bleeding vessel, before the edges of the wound are brought in apposition.

Gentlemen, I have a few more remarks to make on wounds of the abdomen and inferior extremities before I commence the treatment of the complications of gun-shot wounds. In my next lecture I will just glance over the effects of wounds on these regions, and commence the general treatment of the different kinds of wounds produced by firearms.

Reviews.

The Medico-Chirurgical Review, and Journal of Practical Medicine. Oct. 1834. Highley.

The Edinburgh Medical and Surgical Journal; exhibiting a concise Idea of the latest and most important Discoveries in Medicine, Surgery, and Pharmacy. October, 1834. Adam Black, &c.

The Medical Quarterly Review. Oct. 1834. Souter.

The above journals contain their accustomed quantity of articles, and such as are interesting and useful to the profession. But, however much we may admire their contents—however sarcastic and witty, or argumentative and diffuse may be the *reviews*, we cannot withhold the opinion we entertain,—that if a book is to be properly perused, its principles studied, and its maxims impressed on the mind,—there is but one system to be adopted, and that is, referring to the original work. As this is not always practicable, as it is not in the power of every one to purchase the many excellent books that are daily, we may say, issuing from the press, then an analysis of each, which may contain the very pith and marrow of its precepts, is of unbounded value to the practitioner.

In the *Edinburgh Journal* is a series of select communications from the Edinburgh Medico-Chirurgical Society, which are well worthy of attentive perusal. We shall present an abstract of two interesting cases related by Dr. Abercrombie. The first, that of a gentleman, aged 64, had an attack of apoplexy, from which he recovered with the exception of a weakness of the left side, and slight imperfection of speech. In a few months he had another attack, and soon afterwards a third; in this insensibility remained for thirty-six hours. During six years he had twelve fits; was more debilitated after each; paralytic on the left side, with distorted mouth. "*Inspectio Cadaveris.*—On removing the dura mater, a remarkable impression was observed on the surface of the right hemisphere, forming a deep and well-defined cavity, capable of containing from three to four ounces of fluid. It had been filled by a clear serous fluid, which escaped when the dura mater was wounded in opening the head. The surface of the cavity presented nothing different from the usual appearance of the cerebral surface, being covered by the arachnoid and pia mater; but the dura mater was extended across the mouth of it, and had inclosed the fluid by which the cavity was filled. On cutting into the cerebral substance which bounded this cavity, it was found more dense than natural; and, immediately below the bottom of it, in the substance of the hemisphere, a cavity was exposed, presenting the usual appearance of a collapsed apoplectic cyst, which had been the seat of an extravasation. It was about an inch and a half long, lined, as usual, by a yellowish membrane, and part of it was obliterated by the adhesion of its opposite surfaces, a thick layer of the same kind of membrane being interposed between the surfaces of cerebral matter at the place of adhesion. Several other very small cysts were observed in various parts of the right hemisphere, but they were all empty, and no appearance could be

discovered capable of accounting for the fatal attack." "The leading peculiarity," remarks the Doctor, "of this case, is the remarkable cavity on the surface of the brain, produced by actual loss of cerebral substance at the part which covered the apoplectic cyst. It presents another fact of some importance, namely, —the most distinct approach that I have ever seen towards an obliteration of the cyst by the adhesion of its opposite surfaces. The French writers describe the cysts as being entirely obliterated in this manner. I was formerly disposed to doubt the accuracy of these observations; but, in this case, about one-half of the cysts was obliterated, and there did not appear anything to prevent the obliteration of the remainder."

The following case is even more interesting. "A gentleman, aged 34, in the year 1825, was troubled with occasional headach, vertigo, and dimness of sight; blisters and country residence mitigated these symptoms. In 1829, symptoms aggravated, accompanied with throbbing at the back of the head, and vomiting, which continued for three consecutive weeks. The paroxysms occurred in the evening at six o'clock and continued till midnight, and occasionally during the day. At these times his face was flushed; temporal arteries distended; was unable to speak, with almost total unconsciousness; hands and arms spasmodically contracted; double vision; pulse natural; bowels constipated. After continuing in this state for a few weeks, an improvement took place, so that he was enabled to walk out. In 1830, symptoms again recurred; pain chiefly above the eyes; remissions more complete; suffered less than previously. His health again improved, but symptoms reappeared with their usual intensity. In one of the paroxysms he suddenly expired. On the body being examined, the following abnormal appearances presented themselves. The ventricles of the brain contained from three to four ounces of limpid fluid, but the cerebral substance was entirely healthy. Imbedded in the left lobe of the cerebellum, there was a tumour, the shape and size of a very small walnut. Externally it was firm, and presented the usual appearance of the scrofulous tubercle; internally it was softened, with the usual appearance of unhealthy scrofulous suppuration. The substance of the cerebellum around it was entirely healthy. All the other viscera were sound.

"It is unnecessary to point out the remarkable features presented by this case; the extraordinary remissions in the symptoms, the periodical character of the paroxysms, even at the time of their most intense severity, the long interval of comparative health which preceded the final attack, and the very sudden nature of the fatal termination, we may add the healthy state of the whole cerebral substance after much protracted suffering."

The morbid lesions of the nervous system have of late years attracted the especial attention of Abercrombie; he has collected a large number of facts, and subjected them to a rigid generalisation. But the chief object in this class of diseases, is to accumulate facts, to show the association between symptoms during life, and morbid appearances after death. By this method of procedure, and this only, can a correct diagnosis be arrived at. Such observations would go far to elucidate the function of the different parts of the brain. If we meet with disorder of one or more of the mental manifestations, and we find after death a certain part or parts of the brain disorganised, and this coincidence be presented again and again, it is a logical inference that the healthy manifestations are connected with these particular structures.

We are unable to notice these journals further than expressing our approbation of the manner in which they are conducted; they are what we could wish them to be,—media of useful information to the practitioner.

Lectures on the Ordinary Agents of Life, as applicable to Therapeutics and Hygiene. By Alexander Kilgour, M.D.

Under this simple and unpretending title we find subjects treated of the utmost importance, not merely to man as an isolated being, but to individuals in their collective capacity as forming nations. And when we mention that the author takes a comprehensive review of the modes and relations of the atmosphere, as regards its density and lightness, its temperature, its states of dryness and moisture, its electrical conditions, and the sudden alternations of all these, we have only pointed out some of the heads of one lecture. But without copying the table of contents we may merely observe

that the reader will find the subjects of climate, exercise, foods and drinks, clothing, cleanliness, and other similar interesting matters discussed with much ability and laudable research.

Dr. Kilgour justly observes, that medical police, or the application of legislation to relieve the physical necessities, extend the physical comforts, and improve the physical condition of the human race constitute an important part in the science of government. To be enabled to do this, it is evident that the legislature ought to know something of the constitution of the human frame, of its capabilities of improvement, of its liabilities of deterioration, and of the nature of the agents producing both.

But if this knowledge be so necessary to the legislature, how paramountly more so is it to the medical man, and yet few subjects in the present day are less known to him! When a medical man is called upon to give evidence on subjects connected with public health, it not unfrequently appears that he had only thought of it for the first time when before the committee of inquiry, and appears surprised that he should be expected to prescribe for health, while he believed his whole duty was comprised in being able and qualified to prescribe for disease.

Although it must be acknowledged that the elementary principles of medical police are derived from the aggregate evidence afforded by the observation of individual facts, yet, these once obtained, the most satisfactory and conclusive evidence of their correctness is to be found in the observation of the influence of physical agents on large communities and in extensive districts.

Food, drink, air, exercise, rest, sleep, excretions, retentions, and passions of the mind were known, from the time of Galen up to a period scarcely gone by, by the absurd name of "the non-naturals." But much attention was paid to these matters long prior to the time of Galen, as we see exemplified in Hippocrates's treatise, "*de aëre, aquis, et locis.*" The Greek physicians knew very well that the greater number of diseases arose either from some error in diet, casual or habitual, some effluvium or vicissitudes in the atmosphere, some over-exertion or fatigue, or from certain secretions suppressed, or excretions retained, or, lastly, from some violent emotion of the mind, and that the first step in checking the disease was by removing the cause of it. It was in keeping these facts in view, and sedulously putting them in practice as therapeutic agents, that the Greek physicians principally excelled. With what other object did they so much cultivate the athletic exercises of the gymnasium, or use frictions, or, with an almost religious punctuality, resort daily to the Thermæ and Suditoria?

The observances of hygiene are, therefore, in their nature, those which appertain to the sick, and which are comprehended under the term *regimen*, those which individuals themselves adopt for the governance of their own health, or those sanatory rules which a man has been enabled to deduce from his own personal experience, as conducive to the preservation of his health; and, thirdly, the regulations, or enactments, which a wise and provident government adopts, or enforces, for the health of the whole community. Of the latter description are all those enactments relating to public sewers, public nuisances, as the accumulation of filth and the laws of quarantine; of the former are the drainage of public lands that are marshy, the plentiful supply of wholesome water, the establishment of hospitals, and other such public works. It was to the crusades that we owe the first institution of hospitals in Europe. The heroic and enthusiastic followers of the banners of the Holy Cross brought back with them the leprosy, but with the bane they also brought its antidote. Lazarettos were built to keep the unclean by themselves, and to prevent the propagation of the disease; the disease, for which such places were first erected, disappeared in the course of time, but not the institutions, and it was from the lazarettos that sprang our infirmaries and hospitals. The science of medicine, in its career of philanthropy, picked up the invalid and made him sound, who formerly would have been left by the way-side to perish as incurable. Thousands are now sent back to society from the healing hands of the physician and surgeon, who would have formerly been allowed to pass uncared for to the grave!

It were out of the question to pretend to give any thing like a sketch of the many interesting subjects treated of in these "Lectures,"

with any chance of being able to embody it in a reasonable compass. The carcass of our little journal would, we fear, share the fate of the frogs in the fable; but, nevertheless, we shall present our readers with a glance of one or two of its leading arrangements.

Since the continent of Europe has been open to us, various medical men have taken to the profession of what can trace itself back to a very ancient date, that of medical itinerants, and, with interested views, have written on the more especial sanatory influence of the favoured spot they have fixed upon as their head-quarters. Dr. Kilgour has some very sensible and just remarks on this subject. "The physician," says the author, "has a heavy responsibility upon him, who prescribes a distant climate. He may be adding a bitter pang to the dying moments of the patient, and hurting the worldly interests of the friends that survive him. The death-bed pillow is best smoothed by the hands of relatives and friends, and if death is unavoidable from the disease with which the unhappy patient is afflicted, why not let him give up his breath in the midst of his family, and in his own home?" We most cordially agree with our author in these sentiments, and trust that the general condemnation the practice is meeting with, from the most intelligent and best informed part of the profession, will undeceive the fallacious hopes of the dying invalid, who, in search of a haven of health, becomes the victim of the vain pursuit.

On exercise, our author is not less judicious in his observations. "It is a law of our nature," says Dr. Kilgour, "that the more we accustom any part to exercise, the stronger does that part become; and this is the case *both with the mind and the body*. The practised logician or barrister will much sooner detect a sophism than the raw youth from the university; and the blacksmith, who has just completed his apprenticeship, will swing round his head a forehammer which would defy the heaviest Fellow of a college to lift. One person is born with a stronger constitution than another, as one is born with a better intellect than another; but both will be improved by exercise; whilst, by neglect, both may be beat by two others originally much weaker, but who have carefully cultivated and improved that which they at first received."

Whilst we have thus far expressed ourselves in commendation of these "Lectures," it becomes our impartial office to express our disapprobation at the occasional appearance of a petulant flippancy that disfigures various parts of them; and, perhaps, in no part are these transgressions against good taste more prominent or offensive, than in the very place where they ought least to have presented themselves—we mean the preface. If the author would take our advice, he would leave out the preface altogether in the boarding up of the next copies. Nevertheless, we frankly recommend these "Lectures" to the favour of the profession, abounding, as they do, with so much valuable information.

The Anatomy and Operative Surgery of Inguinal and Femoral Herniæ. By Valentine Flood, M.D., M.R.I.A., Lecturer on Anatomy and Physiology at the Richmond Hospital, Dublin. With 8 folio plates. Folio, pp. 13. London: Sherwood and Co.

There is no subject in surgical anatomy which has been more thoroughly laboured at, than that of the parts concerned in inguinal and femoral hernia, inasmuch, that to enable the student to find his way with safety through the labyrinth that has been created by the different views of some writers, the inaccuracies of others, and the fancied novelties of a third set, some plain matter-of-fact work was necessary, which should state what is in nature, and no more, and illustrate that in a way most intelligible and most accessible to the students.

Such a work is that, the title of which heads this notice; it is by a Dublin anatomist of excellent reputation, and the fidelity and clearness of his descriptions, aided by the *plans* of the different forms of hernia, excellently well devised, and, as we perceive, entirely "of his own composing," prove that, so far as this subject is concerned, that reputation is well deserved.

We have space only for two observations in reference to our author and his work. We take the liberty of advising the former, when next he proposes to publish, to look a little more closely to the *style* of his descriptions, and, as regards the latter, we recommend it strongly to the notice of all practitioners who

wish to keep up their knowledge of this important subject, and of all students who wish to acquire it with accuracy and facility, and this we can do with the safest conscience, as the price is within the reach of all.

A Practical Treatise on Injuries of the Head.

In our last number we gave some excellent observations, delivered by M. Dieffenbach, on wounds of the scalp. In a small manual, entitled "A Practical Treatise on Diseases of the Head," many practical and useful observations are made on the same subject. The following we extract, as the opinions are similar to those given by that celebrated Berlin surgeon:—

"*Erysipelas, as a Consequence of Injuries of the Scalp.*—Erysipelas generally occurs in persons of a bilious habit, and is sometimes a very frequent consequence of wounds, especially in large hospitals, where bad air, crowded wards, and unwholesome diet contribute not a little to its development. There is no part of the body, in which wounds are so likely to be followed by erysipelas, as in the integuments of the head. The greater number of punctured and contused wounds of the scalp, in the hospitals of a large city, are attended with more or less of this complication. But in some constitutions, even when placed under favourable circumstances, it will occur from the most trifling injury. Sir Astley Cooper mentions a fatal case of erysipelas, which followed the excision of a small encysted tumour from the forehead *.

"Erysipelas commences, in general, from the third to the seventh day from the receipt of the wound. Its symptoms, and even its appearances, vary in almost every individual case. Sometimes the constitutional symptoms precede the local, as in idiopathic erysipelas; but generally, in the traumatic disease, we shall find some difference in the appearance and sensation of the wound, or the surrounding integuments, to be the first indication of its approach. The following, in the majority of cases, is the order in which the symptoms are developed.

"Pain, sometimes dull and obtuse, at other times acute and pungent, in the immediate situation of the wound, is generally the first symptom of the approach of erysipelas. A puffiness of the lips of the wound, at first slight, but very soon more marked, next attracts our attention, and, at the same time, the surrounding integuments are more or less red. If we now examine the tongue of the patient, we shall find it covered with a yellowish fur; he has a distaste for every species of food; he is distressed with nausea and occasional vomitings of bilious matter; and sometimes he complains of uneasiness in the region of the liver.

"As the disease advances, the swelling and redness extend, occupying the whole of the scalp, and are propagated even to the face. The ears and eyelids are generally comprehended in the tumour,—the latter of these are sometimes so distended as to be completely closed. On pressure the colour disappears, but immediately returns on removing the finger. The swelling is always attended with œdema. Scattered vesicles form on the face, but never on the hairy scalp.

"In a still more advanced stage, the pain in the head and sleeplessness increase; delirium sets in, followed by coma; the thirst is excessive; the skin is dry, and is attended with that *calor mordax*, so remarkable in bilious affections; the pulse is hard, small, contracted, and frequent *. The appearance of the wound changes. If it be recent, the edges are swollen and dry, not secreting any fluid, and the dressings adhere to the wound. If pus has been already secreted, it changes to a yellowish thin sanies, often fœtid. The tension of the integuments is sometimes considerable, sometimes not so much marked. Occasionally the disease terminates in desquamation; but, if our endeavours to procure resolution have failed, collections of matter are formed, which are discharged by openings behind the ears, or in the upyer eyelids, or death itself may ensue.

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* Lectures, 2nd edit., 18mo., p. 112.

* The pulse seems to be subject to more variety than any of the other symptoms, owing, perhaps, to differences in the constitutions of the patients; and hence we may account for the difference of opinion which exists amongst authors on this subject. Occasionally we shall find it soft, compressible, and not much increased in frequency.

"The *swelling* in erysipelas is flat,—not pointed, as in phlegmon; it is diffused, and has not the hardness of phlegmon. In erysipelas, the *pain* is *burning;* in phlegmon, *throbbing*. The *colour* of the former is circumscribed, and varies from a uniform light red to a brighter colour, often, after a few days, mixed with a yellowish tinge. The *phlegmonous redness* is diffused, not uniform, but deep and livid at the centre, light and shaded off at the circumference. Erysipelas has a strong disposition to spread by continuity, and is, at all periods of the disease, *erratic;* not so with phlegmon, which is, from the commencement, limited and stationary. If the erysipelatous inflammation is to end favourably, it does not spread so quickly as when it is likely to terminate in suppuration. Phlegmon is said to be a *healthy* inflammation; erysipelas *unhealthy*: the fever in the former is of the *sthenic*, in the latter, of the *asthenic*, type. The terminations of the one are generally favourable; those of the other are frequently the reverse.

"The fever, in erysipelas, generally proceeds *pari passu* with the local disease, and both get better or worse together. In the course of the disease, the tongue becomes of a mahogany colour, and there is often considerable tenderness in the epigastrium. If patient is to die, he dies of the fever, comatose. Erysipelas is more dangerous when it affects the head than any other part. Sometimes we shall find the disease apparently epidemic, and more prevalent than at others; this occurs generally in damp and changeable weather.

"The appearances, on dissection, of those who have died of erysipelas of the scalp, are very unsatisfactory. In the majority of cases, we shall not be able to detect in the brain or its membranes the slightest trace of inflammation, thus disproving the assertion of some authors, that the patient dies in consequence of the *translation* of the disease to the brain. A few cases are recorded, in which an increase of vascularity in the pia mater was observable, but I believe the general result of examinations has been, what I have stated above,—far from satisfactory.

"When we reflect on the above account of the disease, we shall be disposed to admit that it is chiefly a constitutional affection, depending on disorder in the liver and primæ viæ; and that there is a real, though obscure, relation between the gastric organs, and the parts affected by erysipelas,—a relation which becomes the more striking, when we consider that the local symptoms rarely become violent without the liver being affected,—sometimes even to such a degree, as to have abscesses formed in it. But this circumstance will more naturally come before us in the consideration of suppuration of the brain from concussion, &c.

"Occasionally, the erysipelas assumes the phlegmonoid character, more than the bilious. In such cases, the symptoms are more violent, and more nearly resemble those attending inflammation under the aponeurosis, already described. It has been asserted by some authors, that the erysipelas attending wounds of the scalp is owing to injury of the aponeurosis; and, in consequence, incisions down to the bone have been recommended. There are cases of *phlegmonoid* erysipelas, where this treatment may be required, in order to give exit to sloughy cellular membrane; but, in the *bilious* form, the affection is external to the aponeurosis.

"From what has been said, it will be easy to conceive that the treatment of erysipelas of the scalp must be considered with reference to the local inflammation, and the constitutional symptoms. A strict attention to the constitutional treatment is, in general, of far greater consequence to the patient, than a like solicitude about the state of the wound or the surrounding inflammation; but still there are many cases, in which we shall find mere constitutional measures insufficient.

"The local treatment recommended by Desault consisted merely in the use of emollient poultices and fomentations to the wound only, and discutient applications to the erysipelas*. But we shall meet with cases where these measures will not suffice, and we shall be obliged to have recourse to the local abstraction of blood by means of leeches. The application of leeches to erysipelas has been objected to by some of the most experienced surgeons in this city, through fear of the bites being afterwards converted into ill-conditioned ulcers. This fear appears to arise more from

* Œuvres Chirurgicales, vol. ii. p. 9.

pre-conceived opinion, and an attachment to a favourite system of practice, than from actual observation. Every one who has had an opportunity of witnessing the good effects resulting from this mode of treatment, in the Meath Hospital, will have no hesitation in applying leeches to the erysipelatous tumour following wounds of the scalp. In every case where we are obliged to use general blood-letting for the cure of this affection, the local application of leeches will have a beneficial effect; and, in milder cases, it will be proper to apply them without previous venesection. The number we apply must, in general, be considerable,—regulated, however, by the age and strength of the patient, the extent of the erysipelas, the degree of tumefaction and tension of the scalp, and the extent to which we have carried our other evacuations.

"But, as we have already seen, it is upon the constitutional treatment we are to place our chief reliance. In some cases, particularly in young and plethoric subjects, the fever is so high, and the local symptoms so violent, that we must at once have recourse to venesection, without losing time in the adoption of any less decisive remedies. The bleeding should be in proportion to the urgency of the symptoms. Sixteen ounces may be considered as an average quantity to be taken at one operation, and this may be repeated, if necessary. The blood-letting is to be followed by the application of leeches, as directed above, and the other parts of the antiphlogistic system, hereafter to be spoken of. In milder cases, where bleeding has not been practised, we must keep in mind, that the peculiar appearance of the wound and surrounding integuments depends entirely on some disordered state of the chylopoietic viscera, and to correct this disorder must be our chief aim. As the bowels are generally more or less constipated, and often loaded with ill-digested food, we should in the first place administer a smart purgative, and assist its action, if necessary, by an enema. Perhaps as good a formula as we can adopt, to fulfil this indication, is the following:

"℞. Pil. hydrarg.
Calomelanos, ana, gr. xv.
Pil. colocynth. comp. ʒ ss.—M. et divide in pilulas duodecim.

"Two of those pills may be given to the patient, and followed, in about three hours, by two or three ounces of the following mixture (the ordinary *black-bottle*), which may be repeated every two hours till the bowels are well freed:

"℞. Infusi sennæ, ℥ vij.
Tinct. sennæ, ℥ ss.
Elect. scammonii, ʒ ij.
Sulph. magnesiæ, ℥ iss.
Antim. tartarizat. gr. j.—M.

This end having been obtained, we may next proceed to administer tartar emetic, after the manner of Desault, dissolved in a large quantity of liquid. It may be dissolved in whey, in the proportion of a grain to a quart, and of this the patient may drink as much as he can bear in the course of the day. Or it may be given in the drink called *imperial*, according to the following formula:

"℞. Potassæ supertart. ℥ j.
Aquæ ferventis, ℔ ij.
Corticis limonis, ʒ ij.
Sacchari albi, ℥ ij.
Antim. tartariz. gr. j.—M.

Some practitioners recommend the tartar emetic to be given at the outset of the disease, in doses sufficient to produce vomiting. This has been objected to, as likely to cause determination of blood to the head, and coma. I believe there are no just grounds for this apprehension. Emetics are constantly prescribed in erysipelas of the scalp, with the best effects, and I have never known them followed by any bad consequences. If we shall have administered an emetic in the first instance, we may afterwards proceed to the purgative and nauseating plan, as directed above.

"By the above local and constitutional treatment, judiciously followed, we shall, in most cases, be able to subdue the disease in young and previously healthy subjects; but old, debilitated persons, when attacked by erysipelas, often require a directly opposite mode of treatment. In them the disease seriously impairs the powers of life, and we must rather endeavour to support them, than to combat the local affection. A free use of bark and wine will, in such cases, be often necessary. When the bowels are confined in those cases, aperients may be given in combination with tonics, as follows:

"℞. Sulph. quininæ, gr. xij.
Pil. hydrarg.
— aloeticæ, āā, ℈ j.
Pulv. cinnam. comp. gr. xij.—M.

Divide in pilulas duodecim.—Sumat duas tertiis horis ad alvi solutionem.

"We shall know whether we are likely to succeed in our endeavours to arrest the disease, by the following circumstances: the fever abates; perspiration appears on the surface of the whole body; the tongue loses its yellow fur; the discharge from the wound recovers a healthy appearance; the inflamed surface becomes pale and wrinkled, and the cuticle begins to desquamate. After the free use of evacuations, even when the local inflammation is nearly removed, a white tongue, and other symptoms of disordered digestive organs, will sometimes remain. Under these circumstances, the use of calomel and James's powder is very advantageous. They act copiously on the bowels, clean the tongue, and improve the state of the stomach. Two or three grains of calomel, with a like quantity of James's powder, may be given every six hours, for one, two, or three days. The hydrargyrum cum cretâ might be used in the same way.

"When the above means have arrested the inflammation, the patient is probably reduced in strength, and may require the aid of nutritive diet and tonic medicines. These should seldom be employed, till the pulse is quiet and the tongue clean, least they should induce a relapse of the disease. In cases where we are in doubt whether stimulants should be administered or not, the carbonate of ammonia is the best medicine we can employ. From five to eight grains may be given in a draught, every six hours, without any risk of reproducing the inflammation, and in many cases with decided advantage. Bark comes next in order to the volatile alkali, and the sulphate of quinine is the most eligible form of the remedy. Wine is sometimes necessary, but should be used very sparingly, and discontinued as soon as the necessity for its exhibition has ceased *."

"* See an excellent paper on erysipelas by Mr. Lawrence, in the 14th volume of the Medico-Chirurgical Transactions."

EXPERIMENTS ON VISION.

BY M. AIME.

(*From the Annales de Chimie et de Physique.*)

If a small black point be made upon paper, and the head of a pin placed between it and the eye, three or four distinct black points will be seen at the pin's head; these spots vary in position, according as the eye makes more or less effort to see the pin's head, which should be held about two inches from it. The greater the distance at which the spot is placed, provided the eye can distinguish it well, the more easily will the experiment be performed. If the pin be removed suddenly, the multiplied image generally remains for a certain time, then the spots approach each other, and form one. It is very difficult to see well this latter part of the experiment, for in order that it may be successful it is necessary that the eye should be exactly in the same situation as previous to the withdrawal of the pin, whilst it is constantly endeavouring to take another, namely, that one which is fittest to distinguish the spot properly.

In some cases, this phenomenon presents itself naturally; there is then a diseased condition of the eye, which sees all objects either double or triple, and in which the eye cannot distinguish any objects singly *. A

* The state which our author here describes, is generally the commencement of amaurosis, the black spots being dependent on paralysis of certain parts of the retina. At first they are moveable, and appear to be floating before the eyes, after a time more or less prolonged, they become fixed, other portions of the nerve become affected, and the amaurosis is complete. It is a very dangerous symptom, and should be well watched when it occurs. It occasionally, however, happens, that these spots remain stationary, and the disease does not make any progress, in some cases for years, in others again for life. The double and triple vision to which our author alludes, is owing to a similar affection of the optic nerve, and occasionally also precedes an attack of gutta serena. But M. Aimé is mistaken in making this symptom, which is

very natural measure to remedy this affection consists in making a little hole in a card, and looking through it; in fact, if we endeavour to reproduce the preceding experiments by placing a pierced card before the eye, the appearances we have described will not be seen.

If, instead of placing a pin's head before the eye, a card with a small hole in it is used, a different train of phenomena will be perceived, but it is necessary that a gentle oscillating motion should be given to the card. For if we allow that there are in the eye, as it is generally admitted, certain parts which have different degrees of sensibility to light, then we must admit that there are parts in which the light makes a more durable impression than on others. This being the case, it is clear that a body, oscillating before the eye, will affect differently these different parts of the eye. A card with a hole in it is very proper for such an experiment, for the eye passes successively from bright light to absolute obscurity; the oscillation given to the eye ought to be calculated from the duration of the medium sensation of the eye, which is 0,4 of a second. We perceive during that time a great number of small figures, resembling greyish vessels, ramifying into much smaller ones.

Finally, if, instead of looking through a small hole, we place before the eye a very narrow horizontal cleft, made with a penknife, we perceive nothing, except a few black rays, varying, as M. Pelet has observed, in position and number, according to the distance of the card from the eye. These rays are not fixed, as he says, for if the cleft is held horizontally, so that it cannot move, and the eye is also prevented moving, which is easily effected by half closing the eyelids, we shall then see numerous rays of considerable thickness, and if attention be paid then, they will be seen to diminish gradually, and sometimes disappear. Hence we may conclude that these rays are not fixed, and that they are owing in a great measure to the humour which covers the surface of the eye. When the cleft is held in a vertical direction, we are liable to be deceived by the eyelashes, which themselves produce very black and fixed rays.

There are small globules which we see moving about, on looking through a narrow body. We might at first conceive that they are at a distance, but are soon convinced that they are situated either on or in the eye. They are transparent, and appear to be always descending, as if from their specific gravity; they change their place according to the movements given to the head, and their mobility is such that we cannot suppose them to be in the crystalline lens. If they are situated at the bottom of the eye, the direction of their motions induces us to suppose that their density is less than that in which they swim. They may also be found on the eye, or in the anterior chamber. In order to ascertain if they were on the eye, I endeavoured to remove them with a piece of wetted linen; the difficulty of the operation made me have recourse to another. After having completely closed the eye, I turned towards the sun, and I could perceive through the eyelid the small globules as moveable as when the eyelid was raised, and as ready in descending. This experiment ought not to be regarded as a proof, but as a probability, that these globules are to be found in the interior of the eye.

These various appearances which our author describes are occasionally to be seen without having recourse to experiments; we mean, of course, in a diseased condition of the eye. They form one or other of the stages or premonitory symptoms of amaurosis, and are more frequent in those persons who, by their occupations, are necessitated to exercise their eyes in long and painful, or minute, work. Persons who read much, and especially small type, so long as to fatigue the organ, watchmakers, cutlers, more especially the surgical instrument makers, opticians, and sometimes also printers, are among those who more especially suffer from these complaints. Engravers also may be classed among them. We knew an instance where these *muscæ volitantes*, or floating bodies, were so exceedingly troublesome, by constantly interfering with the view of the object to be engraved, as to render it necessary for the individual to give up his employment. Those orders of the productive

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called *amblyopia*, always attendant on the black spots; we have seen many cases where the spots were present, and terminated in amaurosis, without amblyopia occurring; and the converse holds equally good.—Rev,

classes we have just signalised may generally be recognised after they have been some time at their employment, by the very prominent and dull eye, with a certain appearance of hebetude in the countenance, which this complaint always induces. We have known several instances of gutta serena in watch-makers, in whom it is evidently caused by the minute nature of their work, and the constant employment of one eye with the glass. In opticians, a similar cause produces a similar effect. With surgical instrument makers the complaint is by no means uncommon; the fine point to which the lancet, instruments for operations on the eye, and many others of our surgical apparatus, must be brought, strain the eye, and induce a low or chronic imflammation (the progress of which is not a little advanced by the brilliancy of the fine polished steel, as it glances over the stone while preparing for its point), which sooner or later terminates in an incurable affection of the nerve.

M. Aimé seems still to entertain some doubt whether the globules, of which he speaks in the latter part of his essay, are, or are not contained within the eye itself. If we recollect aright, there are consigned in the *Medico-Chirurgical Review*, in a clinical lecture of Mr. Guthrie's on *muscæ volitantes*, one or two interesting cases, in which these bodies were actually seen far back in the vitreous humour, moving with the patient's eye, and falling steadily, when the organ was turned upwards. In one case, a fine web, studded apparently with stars, could be seen in the back of the eye, and which was compared to the American flag floating in the wind. We must, therefore, consider that, at least in some cases, these bodies are seated in the eye itself; they are probably dependent on a partial solution of the vitreous humour, or a breaking up of the cells of the hyaloid membrane.

The Medico-Practical Society of Paris has proposed a gold medal, value 300 francs, as a prize for an Essay on the following subject: "The Description of Iritis, its various Forms, and the best Mode of Treatment." The Essays in French or Latin are to be addressed to M. Le Docteur Alpheé Cazenave, Secretary to the Society, No. 3, Rue Saint Anastase, before March, 1835.

THE
London Medical and Surgical Journal.
Saturday, October 18, 1834.

ON THE REPORT OF INQUIRY INTO DRUNKENNESS.

This Report is drawn up in a masterly manner: it displays the remote and the exciting causes, and the effects of ardent spirits, in a luminous style. A discussion on the subject would appear, *primâ facie*, more appropriate in the channels of political record than in a medical periodical: but we think otherwise. No body of men is assuredly so capable of considering the subject—none witness the baneful influences of drinking so much as a medical man; he sees it produce daily the most distressing maladies, mental as well as corporeal, the constitution shattered, the trembling limbs and faltering voice, the mental imbecility, the excited passions, and the perversion of every good and moral feeling. He can appreciate such effects in their full value; he can explain the *modus operandi*, to a certain extent, of such noxious articles on the nervous system; he can also delineate their injurious effects. When man lived upon the wild fruits of the forest, and quenched his thirst at the limpid stream, the metaphysician tells us he was happier than now, that crime was less, that the base passions of nature were less developed; but these are dubious conclusions. It would involve the great unanswerable principle,—whether the uncivilised man, the very savage of Otaheite, possesses an equal number of pleasures and gratifications as the civilised European. We shall not attempt to answer the question. As civilisation advances, invention is employed to create new luxuries. Not a century ago, the peasant was contented at his master's board, where he might drink to repletion of the juice of "barley-

corn." Spirits were unknown to him; wine he of course never tasted. But now, in this enlightened age, the peasant has his wine and his grog, and the "coal-heaver by profession" his dram. We might almost infer that, as the intellect becomes elevated, the passions become debased; but we will not libel human nature. We witness in this "Report" alone a great portion of the human species in a state of moral degradation,—deformed in body as well as in mind. We shall give a few extracts, which prove that drunkenness is attributable almost entirely to the existence of "gin palaces," to the alluring temptations they present. In the evidence of a very intelligent witness, Mr. Wilson, of Westminster, an old resident there, we have the following remarks:—"That the poor wretched girls who live by prostitution, and who are the best customers to the gin-shops, die off in almost four years; four or five generations have passed away during the time I have lived there (fourteen years)."

To the question, whether if the sale of spirits only on Sunday was prohibited, would not the same effects ensue from the drinking of beer? we have the following answer: "Beer does not appear to be the intoxicating drink of the labouring classes now in the metropolis." These are startling facts and interesting to the medical man, as showing him the effects of stimuli long continued.

From the evidence of Mr. Gell, the Coroner for Westminster, it appears that, out of twenty-five cases of sudden death, on which inquests were held, twenty of them were in a previous state of intoxication. To the medical man this is an important fact, in enabling him to elucidate, in his post mortem examinations, the cause of death. For what might be evidences of disease, or inflammation, supposed to result from poisonous agents, might be the effects of intoxicating liquors only.

Dr. Ellis, Physician to the Hanwell Asylum, examined.—"Out of twenty-eight cases, admitted last year, that were reported to us as having been recent cases, nineteen out of those twenty-eight were drunkards."

"The health of those, who are insane from drunkenness, is worse than of those from other causes."

"We very rarely open the head of any person, who has been any length of time deranged, without discovering great disease."

We shall continue the subject in our next number. It is of paramount interest, not only to the profession as a philosophical topic, but to the community as connected with the welfare of society, to its present condition, and in reference to the future development of human progeny.

GRESHAM PROFESSOR OF PHYSIC.

The Gresham Professorship of Physic, which, like all, or nearly all, the foundations on the Gresham estate, is fallen into gross abuse, is vacant by the death of Dr. Stanger, so famous for his hostility to the College of Physicians. The Professorship is worth 100*l.* per annum, and in the present state of things is a sinecure. The election is vested in the hands of a certain court of the Mercers' Company, the number of electors not exceeding ten or twelve, among whom are some of the most influential and wealthy London merchants. We hear that, although celibacy is required in the occupant of the chair, there are several candidates in the field; among whom are that notorious medical pluralist, Dr. Hue, of Bartholomew's, Dr. Southey, Sir C. Scudamore, and Dr. Aldis.

SEAMEN'S FLOATING HOSPITAL OFF GREENWICH.

An election for the office of Assistant-Surgeon to this hospital has recently taken place, when Mr. Tuckett was elected by a majority of three. The appointment is worth 150*l.* a year, board and lodging. There were six and thirty candidates, but two only went to poll, Mr. E. Browne and Mr. Tuckett, the former having eleven, the latter fourteen, votes. The election rested with the committee, who are twenty-nine in number.

The hospital, a man-of-war of 104 guns, was established by Capt. Gordon, R.N., out of the surplus of funds subscribed for the relief of distressed seamen. The other medical officers are a surgeon, at 200*l.* a year, and an apothecary at 80*l.* The institution, we understand, is very rich.

Foreign Medicine.

Gangrenous Epidemic of the Spleen, which prevailed in the Year 1831, *in the Village of Mandrowo* (*Russia*).

BY DR. TSCHETIRKIN.

Translated from the Russian into the German Language by Dr. Magasiner.

There has not been any description of gangrene of the spleen in man in this country up to the present time; we therefore think it will be interesting to our readers to give, in a condensed form, a few details of this epidemic.

1st. *Progress of the Disease.*—Without any precursory symptoms, the patient complains of a burning sensation about the lower part of the epigastrium, accompanied with insupportable pain in the left hypochondriac region; this insensibly extends over the lower part of the epigastrium to the right side. In a short time much uneasiness supervenes, accompanied with ejection of greenish liquid. At the commencement of the disease the tongue is dry, no thirst, appetite impaired, difficulty of respiration, pulse in general hard—sometimes small, at others full, alvine dejections natural, urine scanty and red. The patients feel a sensation of liquid rolling about in the left side. In a few days symptoms of putrefaction appeared in one of the patients, who, in a few hours, died. He experienced darting pains in the side, flatulence, rumbling noise in the bowels, intense thirst, increase of uneasiness about the abdomen, continual vomiting, yellowness of skin and of the sclerotica: pulse frequent; cramps, with coldness of the extremities, and finally death. In a case of recovery all these symptoms gradually diminish, with the exception of a disagreeable sensation in the left hypochondrium, which also in a short time disappears.

From its commencement this affection presents symptoms of inflammation of the spleen, which, by rational treatment, may be combated. It took on the symptoms of typhus only in two individuals of debilitated frame. The symptoms of the three patients who died, in the commencement, presented the same characters as in the eleven that survived; and the dangerous symptoms we have named only came on at the termination of the disease. At a later period the disease assumed a typhoid nature, which was proved not only by its progress, but also from the post mortem examinations. In the commencement of the disease all the phenomena indicate an affection of the venous system.

Not in any of the patients were nervous pains manifested. The cramps that supervened a short time before death, may be attributed to a secondary affection of the spinal marrow. The first of those attacked suffered greatly, and one of them only for a very short time. Afterwards the disease became less aggravated.

2nd. *Autopsy.*—The bodies soon became in a state of putrefaction particularly about the region of the spleen, where in a few minutes a black spot was observed. The spleen was softened, spongy, and, as it were, engorged with a black sanguineous fluid; on its posterior face gangrene had commenced; this might be traced to the centre of this organ. The peritoneum, stomach, and small intestines presented vestiges of inflammation; the liver was of a bright yellow colour; gall-bladder filled with bile.

3rd. *Etiology of the Disease.*—The affection was not contagious, but simply epidemic, for example, in the course of three weeks, in one family, two persons only became attacked; one got well, the other died. This disease, as the author states, was nothing more than the

pest of Siberia, and in this country it frequently appeared in a sporadic, and under different forms. M. Tschetirkin concludes by stating that it is possible that the rapid diminution of the disease, at least in the cases that presented themselves, might be owing to the intense cold, which for some time had set in. He did not observe that any of the domesticated animals were attacked by this disease.

4th. *Treatment.*—In the commencement, antiphlogistics, such as local and general bleeding, and acidulated drinks. In the two cases in which typhoid symptoms became manifest, he prescribed the calamus aromaticus, with the addition of muriatic acid, a sufficient quantity to make it palatable; also eight grains of camphor in the course of the day.

We will here add a few cases in illustration of this disease.

Case I.—Stephen Ischerwonow, 28 years of age, of feeble constitution, complained on the 29th of January of a burning sensation about the lower part of the epigastrium, more confined to the left side. The following symptoms soon supervened—burning pain all over the lower part of the abdomen, much more intense about the region of the spleen; tongue dry; moderate thirst; anxiety; unpleasant sensations about the stomach; pulse small, hard, and frequent; stools natural; urine scanty and red. These symptoms came on in a few hours after the appearance of the affection. Bleeding to 16 ounces. The same medicine was given as recommended in the treatment.

On the 30th, pain in the side continued, and leeches were applied.

Feb. 1st. Great debility; skin and eyes yellow; obtuse pain in the side; flatulence; pulse very quick. Medicines continued, with the addition of the sweet flag and muriatic acid.

2nd. All the symptoms have diminished, the patient has become in a state of convalesence.

Case II.—Mationa Markowa presented exactly the same symptoms as the above, and was treated successfully in a similar way.

Case III.—Agaphia Korabelnikowa, ætatis 21, robust constitution, was attacked on the 29th of January with burning pain in the epigastrium, which extended, as in the other cases, all over the lower part of the abdomen. This pain soon became accompanied with a disagreeable sensation about the abdomen, and a quick and hard pulse. A pint of blood was taken from the arm, and a similar medicament prescribed.

Feb. 3rd. All symptoms have disappeared.

Eight other persons, four men and four women, attacked with the same disease, are reported to have been cured by this treatment.

Foreign Hospital Reports.

HÔPITAL DES ENFANS MALADES.

Rheumatism of the Joints followed by Pericarditis and Pleuritis—General Dropsy—Death from Œdema of the Glottis—Adhesions between the two layers of the Pericardium, and Dilatation of the Cavities of the Heart.

Irma Hachette, æt. 8 years, of the lymphatic temperament, was suddenly attacked, at the beginning of May, with pain and swelling of the right ankle, accompanied by fever and loss of appetite. The next day the inflammatory symptoms were transferred to the right ankle, and successively attacked the other joints; an obstinate constipation took place, lasting eight days. The left side of the chest then became the seat of pain, and respiration was impeded. A pitch plaster was applied to the left side of the thorax. On the 23rd of May, the following was the state of the patient:—the countenance pale; pain in the left side of the chest; a dry cough; shortness of breath; a dull sound in the inferior part of the left side of the chest; the bronchial murmur and egophony at the inferior angle of the scapula of the same side; pulse 140 in a minute, and 36 inspirations.

25th. Symptoms continue. The plaster to be replaced by a large blister.

29th. The hoarse sound occupies a greater extent on the left side of the chest; pain hardly sensible; pulse 112; œdema of the face. Twelve drops of the alcoholic tincture of digitalis were ordered, which dose was gradually augmented. Under the influence of this medicine, the frequency of the pulse was first increased, but finally diminished. The œdema attacked the superior and inferior

extremities, and effusion took place in the abdomen, and on the right side of the chest.

June 12th. Convulsive movements of the extremities occurred, and there existed much nervous irritability. The powder of valerian was prescribed.

17th. Œdema of the face and extremities continues, together with the effusion on the chest. The pulse is slow, and the temperature natural. The convulsive movements have disappeared. In the evening the respiration became difficult and stertorous, and the countenance assumed a violet hue, which state continued till death, which took place on the 18th.

Autopsy, twenty-eight hours after death.—General pallidity of the integuments, and œdema of the face and hands, were the principal external appearances. The veins of the neck were filled with blood, and the margins of the glottis presented considerable serous infiltration; in some parts the bronchi were of a violet hue, and they contained mucus tinged with blood. Old adhesions existed between the pleura costalis and the right lung. The lower part of the pleural cavity was filled with a serous fluid. Less effusion has taken place in the left pleural bag; on both the pulmonary and costal pleuræ there was an albuminous transudation. Serous infiltration of the external cellular tissue of the pericardium had taken place, and adhesions between its two folds. The cavities of the heart were dilated, their walls being somewhat softer and redder than ordinary. The blood in the ventricles was in a liquid state.

In the abdomen, an effusion of serum was found in the peritoneal cavity; the liver, spleen, and kidneys, were engorged with blood; the mucous lining of the stomach and intestine, though rather highly injected, presented no traces of ulceration. The brain and its membranes were exempt from any morbid appearances.

The following was the summary of M. Guersent's observations on this case.

The post-mortem examination exhibited traces of pericardial inflammation, the existence of which had been indicated by two circumstances,—the coincidence of the sudden appearance of pain in the left side of the chest, with the disappearance of an articular rheumatism; also the effusion in the chest and abdomen which appeared at a later period. The symptoms of pericarditis were completely masqued from observation by those of inflammation of the left pleura. The dull sound was not confined to the præcordial region, but could be perceived both laterally and posteriorly.

The egophony and bronchial murmur then left no doubt as to the existence of a pleuritic effusion. From the examination of the serous envelopes of the heart and of the lungs, by comparing the alterations in their structure, we have reason to believe that pericarditis preceded pleuritis, and that the inflammation was propagated from one serous surface to another. No effusion was found in the pericardium, but its two folds were firmly agglutinated, which was not the case in the pleura, where the effusion was abundant. While on the left side albuminous flakes were found, there were none on the right side. The hydrothorax of the right side, as well as the general dropsy, was evidently connected with the alteration which had taken place in the central organ of circulation and its enveloping membranes. From these various disorders asphyxia resulted, terminating life, and thus accounting for the congested state of the various viscera.

British Hospital Reports.

ST. THOMAS'S HOSPITAL.

Morbus Cordis.

Case I.—Elizabeth Reed, ætat. 47, was admitted into the hospital 20th May, 1834, under Dr. Elliotson, with a disease of the heart. She had been ill three months, and was attacked with frequent purging, accompanied by a copious discharge of blood. She took a severe cold during the period of menstruation, which was abruptly arrested, and the catamenia has not since appeared. She has become emaciated; skin pallid, and the legs œdematous. Has palpitation of the heart, which is increased on the slightest exertion. Complains of pain in the præcordial region on deep inspiration, and cannot lie on the left side. The quantity of urine which is voided differs, sometimes more, sometimes less, than natural. Tongue white; pulse 90, regular, but powerless; the action of the heart increased, and may be heard over a large space, which is dull on percussion; bellows sound, and synchronous with the systole of the ventricle; file sound heard over a smaller circle.

21st. Ferri tartratis, ℈ ss., ferri carbon. ℈ss. ter die.

23rd. Is troubled with a cough, with pain in the epigastrium, and she cannot sleep.—Ordered by the apothecary, liq. morphiæ muriat. ℿ xx. hâc nocte.

26th. She is much improved, passes more urine, and has occasionally some colour in the face. The sharp sound is heard on contraction of the ventricle: has now given place to one duller or less distinct. The œdema of the legs has decreased.

29th She still passes some blood occasionally with her evacuations, otherwise she is much the same.—Ordered injectio aluminis.

31st. The loss of blood by the rectum has ceased; she is, in fact, much improved, with the exception of the œdema of the feet.

June 2nd. The œdematous state of the legs has gradually disappeared. In other respects she is quite well, and on the 5th of the month was presented.

Case II.—Ann Redwood, æt. 38, was admitted into the hospital on the 3rd of June, 1834, under the care of Dr. Elliotson. She had been ill three years, and was then suffering from a paralytic attack, which affected her right side; has been much reduced in strength, and lost flesh lately. She had a cough during the last two winters, but unattended with expectoration. She complains of pain in her back and limbs; pulse 112, small; the action of the heart preternatually increased and irregular, the impulse being felt over nearly the whole of the anterior part of the chest; the respiratory murmur not heard over a large space of the left side; the action of the heart increased by the recumbent posture, which renders that position painful; the bellows sound immediately succeeding the pulse. She has occasionally sudden attacks of dyspnœa; a thrilling sensation is felt on pressing the finger behind the upper border of the sternum.

4th. Venesectio ad ℥ viij. Unguentum iodin. regioni cordis.

6th. No relief from the bleeding, but the appearance of the blood was buffy.—Cucurbitalia cruenta regioni cordis.

10. She has caught cold; dyspnœa comes on if she lies down; pulse somewhat fallen, and the bowels are relaxed.—Hirud. xij. laryngi, pulv. kino comp. grs. x., p. r. n.

14th. Much in the same state as at the last report, though the purging has nearly ceased. Hydrarg. cum cretâ, grs. iij., bis die; emplastrum lyttæ sterno.

16th. She has experienced no relief, and cannot lie down; feels pain when she coughs; the bowels are regular.—Cucurbitalia cruenta inter scapulas, ad ℥ viij., hydrarg. cum cretâ grs. iij., pulv. rhei. composit. grs. v. Quartâ quâque horâ.

19th. Much better, but complains of slight pain when she coughs; she can now lie down; there is only occasional bellows sound. Still continues the use of the ointment.

22nd. She continues improving, and on the 26th was presented quite well.

WESTMINSTER HOSPITAL.

Cases of Spinal Injury and Disease.

(*Continued from page* 351.)

Case II.—*Lateral Projection of the last Dorsal Vertebræ—Treatment by Setons, Rest, and Diet.*—George Blizard, ætat. 3½, a fine healthy looking boy, but with the marks of the strumous diathesis about him, residing in the neighbourhood of Vincent's-square, was admitted January 29th, 1833, into Anne's Ward, under Mr. White. During the whole of the previous month, but not at any anterior date, the mother of the child had remarked that, instead of walking as it used to do, it had become unsteady in its gait, and clung to chairs, tables, or any thing near it for support; this was fully exemplified by setting the child to walk. On examination, projection of the eleventh and twelfth dorsal, and of the first lumbar, vertebræ posteriorly, and arching somewhat laterally, were discovered to exist. The little patient was the picture of health, if ruddy fat cheeks, laughing eyes, constant good humour, and an excellent appetite are indications of it.

A seton was passed on either side of the projection of the spine, and dressed daily. He was directed to be kept in bed, and to have milk diet; the recumbent posture of course could not be enforced on a child of such tender age.

He gradually improved under this treatment, so that, by the end of March, there was very little hesitation in his gait; one seton was then entirely withdrawn, and the other was to be removed by a few threads at a time, so as not to close the drain suddenly, as Mr. White said, if it were done so, it was probable the disease would return.

While this was going on, the child caught a severe cold, and became very ill and fretful, which so alarmed his mother that she took him away.

He was brought again some time afterwards perfectly recovered, both from the effects of the cold and the prior complaint.

Case III.—*Lumbar Abscess.*—Thomas Jones, ætat. 27, a clothier by trade, of middle size, pale, and rather emaciated, lymphatic temperament, scrofulous habit, residing in Pye-street, Vauxhall, was admitted into John's Ward, April the 30th, 1833, under Sir A. Carlisle. About eight weeks ago he considers that he was as well as ever he was in his life. He was then suddenly attacked with shiverings, headach, and dull pain in the loins, without any cause that he can satisfactorily assign. On the 28th a swelling appeared on the right side of the spine, opposite the last dorsal, and the commencement of the lumbar, vertebræ; previously to this he had been gradually losing all command over the lower extremities. The complaint is unattended with cough, or difficulty of breathing, and the

sphincteres ani et vesicæ are unaffected; appetite bad; bowels irregular; health much disturbed.

He was a patient in this hospital three years and a half ago under Mr. White, with lumbar abscess on the same side; a valvular opening was made, and the contents evacuated in small quantities at a time; the opening healed, and a fresh one was made about a fortnight after. His life was saved then with considerable difficulty. He remained in this hospital some time, and says he had quite recovered ere he left.

The tumour is rather more than the size of the palm of the hand at present, forming a prominence in the centre, and is gradually lost in the surrounding parts; integuments undiscoloured; fluctuation can readily be discovered.—Full diet, mutton chop, quinine and rest.

May 8th. The abscess appears to be increasing daily in size; he feels much weaker, and is constantly losing strength. Says he has some difficulty in making water; urine high coloured, and having the ammoniacal odour.

11th. Sleeps very badly; had an anodyne last evening, which procured him a better night's rest. Towards night there is considerable exacerbation of fever, attended with profuse perspiration; skin hot; pulse small, quick, and hurried. Sir A. Carlisle made a valvular incision in the most projecting part of the tumour, passing the knife from below upwards, when nearly a pint of curdy matter, diffusing an unpleasant, sickly odour, was discharged. By gentle pressure on the surrounding parts, above six or seven ounces more were evacuated. Complained of pain towards the latter part, and of a feeling of faintness; had some wine accordingly.

12th. Feels low and weak; fever slight.

13th. The opening had closed, but is reopened to-day, as the tumour is again forming. Some matter similar to that evacuated on the 11th was let out, and the aperture afterwards tented with lint. Pulse small and rapid; bowels confined.—Ordered a dose of Sir A. Carlisle's mixture.

14th. Has passed a better night, and thinks he is improving. Four ounces of flabby matter evacuated to day. Has his chop, porter, and four ounces of wine daily, with quinine.

16th. Six ounces were discharged to-day. Is very feverish, and perspires much at night. Is to have six ounces of wine in the day, and a pint of milk instead of beef-tea, and the following mixture:

℞. Sulph. quinin. ℈j.; acid. sulph. dilut. ʒj.; inf. rosarum, c. ℥viij.—M. ft. mistura; capiat cyathum vinosum bis in die.

17th. The tumour was more completely evacuated to-day than previously, and consequently became flatter, so that a lateral curvature of the eleventh and twelfth dorsal, and of the first lumbar, vertebræ became evident.

22nd. Has an anodyne at night, and sleeps better than he used to do. The discharge has been gradually diminishing for the last few days; pulse continues frequent and rather small.

26th. The tent is now left out altogether; he lies with a draw-sheet under him, and the matter is allowed to flow out upon it. He feels comfortable; appetite improving.

June 10th. Is acquiring more strength; discharge lessened.

25th. Health continues to improve; an ounce of pus discharged daily.

28th. Gets up, and sits on his bed, but cannot leave the ward; pulse improving.

July 13th. Can walk about the ward, and finds himself improving in every respect.

19th. Walks daily in the Park for a short time.—Dismissed on the 6th of August.

Case IV.—*Lumbar Abscess.*—John Styles, æt. 22, a helper in stables, was admitted September 17th, 1833, into Matthew's Ward, under Sir A. Carlisle. Is a man of the leuco-phlegmatic temperament, middle size, and thin. For the last six months he has felt a gradual disinclination and disability for work, attended with general uneasiness and languor, pain in the knees, and weakness when walking. Four months ago dull heavy pains in the back came on, constant, but more severe when in bed; two months after, a swelling appeared on the right side of the loins, smooth and equable, without discolouration of the skin; when it first showed itself, it was small, and continued so until about ten days ago, when, after a ride to Dover, it increased considerably. General weakness; appetite increased; sleeps well; not much pain at present; tongue clean; bowels generally constipated; pulse small and feeble, about 70. The tumour is large, and rather prominent, extending between and over the lower ribs to near the ilium, by the side of the last dorsal, and first and second lumbar, vertebræ; its shape is oval; fluctuation evident; impulse on coughing very clear; complains of pain on pressure over the ribs, but not on the spine, which is slightly curved laterally.

21st. Sir A. Carlisle saw him with Mr. White, and considers that it is not yet fit to open; ordered him the soda internally.

28th. The tumour continues to increase in size, but is declared not yet fit to be opened; is taking half a drachm of the carbonate of soda twice a-day. Mr. White recommended the application of the cummin seed plaster.

A few days afterwards, Sir A. Carlisle punctured the abscess, and evacuated about twelve ounces of unhealthy, badly smelling pus, with flocculi in it. No fever followed, and a few weeks afterwards, he again let out four ounces of a sanguinolent turbid pus; a slight attack of fever followed the second puncture, but was soon removed; the incision was kept parted, so that the pus could be discharged daily.

November 10th. Discharge very slight; has been gradually diminishing for several days past, and health improving in like proportion.

Dec. — The quantity of pus now evacuated is rather more than formerly, and he was dismissed to try the benefit of country air.

Case V.—*Psoas Abscess.*—John Snewing, ætat. 17, admitted May 28th, 1833, into John's Ward, under Sir A. Carlise. Is a short, pale, strumous looking youth, with a considerable distortion of the spine. His residence is in Francis-street, Back Fields.

He has a swelling at the upper and anterior part of the left thigh, extending as far as Poupart's ligament, and including the whole of the front part of the thigh, involving a space of five or six inches round, by four and a half long. This has existed for two months, gradually increasing in size; the integuments are not discoloured, nor does the tumour point; fluctuation is rendered evident by applying steadily the fingers of the one hand, and tapping with those of the other. Its appearance was unmarked by pain in the part, but was preceded and accompanied by occasional pains in the back, darting down towards the thigh. By applying the hand to the depending part of the tumour, and making the boy cough, a sensation can be perceived as if a fluid were driven against the hand, but the contents of the tumour cannot be repassed into the abdomen. Eleven vertebræ are engaged in the spinal projection, which is directly backwards, and in no way lateral; these are the eight inferior dorsal, and the three upper lumbar. His powers of progression are very much diminished, and he soon gets tired and is obliged to give in. His health is suffering; appetite bad; tongue flabby and pale; pulse small and feeble, about 70; bowels generally open; chest unaffected. [His sister, he says, died in St. George's Hospital of hip disease.] Ordered rest, full diet, and porter; the tumour to be poulticed. In a day or two afterwards, he had a gentian mixture, which was soon changed for one containing quinine.

15th. Mr. White made a valvular opening in the most dependent part, and drew off forty-eight ounces of a thin yellowish matter, having a sub-acid smell, and containing white flocculi. As he felt faint, while this fluid was being evacuated, he had a little wine; ordered to keep quiet and in bed.

Up to the 25th he continued going on well, when slight inflammation came on; no fever; and by that day the tumour had filled again as large as before. He had then a severe accession of fever; pulse small and hurried, 120; considerable external inflammation, and an unhealthy discharge from the opening, which had never entirely closed, attended with nocturnal sweatings. The thigh was poulticed, and he was placed on the mist. ferri comp., but this he could not keep on his stomach, and recourse was again had to the quinine, gr. xij. in ℥viij. He continued much in the same way, having severe exacerbations of fever at night, with hectic flush, perspirations, a hot skin, a rapid and small pulse, at the rate of 140 beats in the minute; a constant discharge of a greenish colour, and faint sickly odour, and in great quantity, with loss of appetite, occasional cough, expectoration of a tenacious mucus to a considerable extent, and frequent nausea and sickness, arrested by the effervescing mixture.

By the 2nd of July the fever was lessened, the discharge diminished, and his health altogether improved, with the exception that he was troubled with an unpleasant hacking cough. On the 14th there was very little discharge comparatively speaking, and the worst symptoms had nearly all disappeared. He continued in the hospital until the commencement of September, the discharge diminishing and becoming more healthy in its character, the hectic and perspirations having entirely disappeared. He was also gaining strength. He was then dismissed to try the benefit of country air.

OBITUARY.

Died, at Bath, on the 30th ult., Sir J. D. A. Gilpin, aged 89. Sir J. D. A. Gilpin, M.D., Inspector of Army Hospitals, was born in Carlisle in 1745. He was deseended of an ancient and good family, who resided for several generations at Scaleby Castle, Cumberland. Sir Joseph served an apprenticeship to a surgeon at Longtown, and afterwards studied at Edinburgh. Having finished his medical studies, he settled as a private practitioner at Carlisle, where he remained only a short time. He then entered the army, and witnessed more scenes of active and dangerous service than almost any other person. He lived twenty-six years in the West Indies. In the island of Grenada alone he resided eighteen years, and was there in 1793, when the yellow fever was very prevalent and fatal. In 1794 he was at Martinique, where they suffered dreadfully from a similar fever, and of which nearly all the medical officers died. In 1813-14 he was Inspector of Army Hospitals at Gibraltar, where a disease in every respect similar prevailed to a great extent, and proved very destruetive. Dr. Gilpin was the only medieal man that escaped the contagion, and, what was more extraordinary, not a member of his family, six in number, caught it. The same could not be said of any other family. He took, and also gave to his family, four or five doses of bark every day, by way of keeping up the tone of the stomach. The same plan was also adopted at Martinico, where they also escaped infection. That he fearlessly and faithully discharged his most arduous duties on these very trying occasions, the following extract of a letter from his Excellency Lieut.-Gen. Campbell, to the Right Hon. Earl Bathurst, dated Gibraltar, 25th Dec. 1813, is strong and convincing evidenee:—

"In having the honour to make this communication, I feel it incumbent on me to notice particularly to your lordship the great professional abilities, zeal, and attention, manifested by Dr. Gilpin, Deputy-Inspector of Hospitals, as the head of the medical department. The able manner in which he has conducted the arduous duties of his situation during one of the most trying periods that could have occurred, claims my warmest approbation, and for which, I trust, together with his claims for long service in the West Indies, your lordship will have the goodness to submit the Doctor's pretensions to promotion to the favour-

able consideration of his Royal Highness the Prince Regent." This testimony must have been as flattering to his feelings as it was honourable to his character. It was for these services, we believe, that he afterwards received the honour of knighthood. Sir Joseph was a very agreeable man, and possessed a great fund of anecdote. He had a fine taste for poetry, and was the author of several poems and fugitive pieces of considerable merit. The "Wall Flower," and "Scaleby Castle," deserve particular notice. He was of a mild and amiable disposition, and was much beloved and respected by all who knew him. Sir Joseph resided for many years in Carlisle, was a senior alderman, and several times filled the office of chief magistrate.

APOTHECARIES' HALL.

Names of Gentlemen to whom the Court of Examiners granted Certificates of Qualification on Thursday, October 9th.—John Nathaniel Gardner, Worcester; Robert Gardner Hill, Lincoln; George Leney, Wrotham, Kent; John Henry Freeman, ———; George Fayrer, Bodmin; Edward Francis Crosse, Kington, Herefordshire; James Bates, Halifax; Joseph Humpage, Bristol; Charles Pothecary, London; Robert Gray, ———; John Collins, ———; William Harvey, Taunton; Robert Falkner, Bath; Arthur Maher, Swansea; John Hand, ———; Edgar Jones, Brislington; Thomas Mee Daldy, Rainham, Essex; Edwin Bennett, ———; George Haynes Fosbroke, Bidford, Warwickshire.

MISCELLANY OF FACTS.

A question of law at present excites the attention of the medical world in Paris. A physician, celebrated for his skill in lithotrity, has recently cured the Count de la B——, formerly a minister of Charles X. M. de la B——, after writing in vain to M. A—— to fix the amount of the demand, sent him three thousand francs. M. A——, in reply, stated that i was too small a remuneration for his services, and demanded ten *(dix)* thousand francs in full. M. de la B—— read, or pretended to read, the "ten," "six" (*six*), and sent the Doctor three thousand francs in addition to make up that sum. M. A—— then renewed his demand of the ten thousand in the most positive and plain manner, and the Count in reply refused to give more than he had already done; the Physician then commenced proceedings, and the matter is to be decided before a competent tribunal immediately. In a similar case, M. Dupuytren was paid by a rich banker in a way which he deemed insufficient,—only six thousand francs,—and he replied in the following terms:—"I thank Mr. H—— for the six thousand francs which he has this morning sent me, and I only regret that he did not avail himself of the opportunity to pay me in full."

Sir David Barry, accompanied by his secretary, Dr. Currie, is at present officially engaged in a tour of inspection of the various medical establishments in the north of Ireland. As soon as he completes his investigation, its results will be submitted to government.

We learn from a correspondent from Paris, that M. Dupuytren has resigned his office of Surgeon to the Hotel Dieu, in consequence of his second attack of paralysis. A concours for the vacant office is announced.

A curious fact was stated on Tuesday se'nnight at the meeting of the Edinburgh Town Council, that, up to that period, not a single application had been made for the vacant situation of Teacher of Practical Chemistry.

Dr. James Burnes, E.I.C.S., has been unanimously elected a Fellow of the Royal College of Physicians of Edinburgh.

The office of Physician-General and Surgeon-General to the Forces is dispensed with on the Irish establishment, but the Staff of Assistant-Surgeons is augmented.

Glasgow Faculty of Physicians and Surgeons.—Monday, the following gentlemen were elected office-bearers:—J. Corkindale, Esq., M.D., Præses. Dr. F. Steel, Visiter. Dr. R. Perry, Collector. Box Masters—Dr. J. M'Farlane, Mr. J. M'Cleod. Seal Keeper—Dr. W. R. Gibb. Assistant Examinators—Dr. J. Maxwell, Dr. A. D. Anderson, Dr. M. Buchanan, Dr. W. Young, Mr. G. Watson, Mr. S. Clarke. L. Hill. Clerk. R. Jones, Assist. Librarian and Officer.

Mr. Geo. Bennett has obtained this year the honorary medal of the London College of Surgeons.

APPOINTMENTS.

Naval.—Assist.-Surgeon H. G. R. Page to the Nautilus. Mr. H. Goldney, surgeon to the Stag.

General.—Mr. Edward Murray, resident surg.-apothecary of Nottingham General Hospital. Dr. Blake, physician to the Nottingham Lunatic Asylum. Drs. Carson, Jeffreys, Macrorie, and Reynolds, Presidents of the Liverpool Medical Society. Dr. Donald Cargill, physician to the Strand Dispensary. Mr. J. Coates, surgeon to the Pontefract Dispensary.

BANKRUPTS.

H. Franklin Foley, surgeon, Windsor. W. Pole Carew, surgeon, Newcastle-under-Lyme. John Bellamy, Ross, Herefordshire, apothecary.

DEATHS.

In Africa, Mr. J. Stevens, surgeon, late of Manchester. Mr. J. Merriman, surgeon, of Lancaster. R. Pickering, Esq. M.D., of Barnsley. Mr. A. Dixon, surgeon, of Kidderminster. Mr. J. Fox, surgeon, of Market-street, Herts. At Quebec, Surgeon Lyons, M.D., 34th Foot. Assist.-Surgeon Adams, 8th Foot, on his passage from Jamaica. W. Ross, Esq., M.D.. of Arnage, Scotland. Mr. Elias Thompson, surg., of Stapleton-road, Bristol. Mr. J. Stanton, surgeon, Strand.

Books for Review in our next.

METEOROLOGICAL JOURNAL.

MONTH. Oct., 1834.	Moon.	Thermom.			Barometer.		De Luc's Hygrometer.		Winds.		Atmospheric Variations.		
9	☽	64	66	57	29·77	29·70	77	75	S.S.W.	S.	Cloudy	Fine	Fine
10		60	69	45	29·80	29·85	74	73	N.W.	N.W.	Fine	——	——
11		50	59	46	29·90	29·90	72	70	N.	E.	——	——	——
12		53	58	49	29·84	29·81	73	73	S.E.	S.S.E.	——	Cloudy	——
13		55	61	51	29·78	29·75	72	74	S.W.	S.E.	——	——	——
14		58	63	57	20·57	29·59	76	76	S.S.F.	W.	Foggy	Fine	Cloudy
15		53	57	45	29·56	29·55	75	75	W.N.W.	S.S.E.	Cloudy	——	Fine

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All Communications and Books for Review to be forwarded (free of expense) to the Publisher, 356, Strand, near King's College.

THE

London Medical and Surgical Journal.

No. 143. SATURDAY, OCTOBER 25, 1834. Vol. VI.

LECTURES ON THE THEORY AND PRACTICE OF MEDICINE,

BY WILLIAM STOKES, M.D.,

Delivered at the Medical School, Park Street, Dublin.—Session 1833–34.

LECTURE XXXVIII.

Intermittent Fever—Review of its most Prominent Symptoms.

Gentlemen,—Let us proceed with the subject of intermittent fever. I gave you, at our last meeting, an analysis of the phenomena which accompany the paroxysms of this disease, and endeavoured to show that intermittent fever was not reducible to any form of fever symptomatic of local inflammation, but that it was, as far as we could see, an original affection of the system, connected in all probability with some profound lesion of innervation. I shall now proceed to a brief review of some of the more prominent symptoms.

The first approach of a paroxysm of ague is, generally speaking, pointed out by a degree of languor and debility more or less marked. The patient, without any apparent cause, becomes weak and restless, throws himself on a bed or couch, feels chilly, and has a sensation as if a stream of cold water was running down his back; his features are considerably shrunk, and his skin pale and corrugated. In some cases the surface of the body is cold, and I believe in most cases the patient has a strong sensation of cold, even though the skin may continue warm during the rigor. By degrees the chilly sensation which is first felt along the back extends to all parts of the body; the patient begins to shiver; has horripilatio and chattering of teeth; and as the symptoms increase, the rigors are so violent as to shake the bed on which he lies. The sensation of cold now becomes intense; he calls for warm drinks, and begs of his attendants to heap more bedclothes on him. He is anxious, restless, and uncomfortable, and, if questioned, answers briefly and with reluctance. His pulse is small, weak, and irregular; the action of the heart oppressed, and respiration more or less laboured. The general sensibility is impaired; in some cases there is delirium, in others a state of stupor amounting to apoplexy. Headach is most commonly present, and there is often pain in the loins and sides. The situation of the patient is indeed truly pitiable; he lies beneath a heap of bedclothes, with his teeth chattering, his whole frame agitated by the shiverings, an icy sensation running through his whole frame, and which neither warm drinks nor accumulated covering can relieve. Add to this the headach, the delirium, the stupor, the nausea, and diarrhœa, and you have the picture of suffering complete. This extraordinary condition may last for some time. It is generally terminated by a copious attack of bilious vomiting, when the rigors begin to decline, and are succeeded by alternate flushings of heat. The rigors now cease; the flushings become more frequent and protracted; the patient begins to feel the return of heat; the skin becomes gradually hot, and this increases until the heat gets far above the natural standard, being in some cases as high as 110°. In a few cases, particularly in warm climates, the temperature during the hot fit has been known to exceed this. Accordingly, as vascularity returns to the surface, the features lose their contracted appearance and the skin its paleness; the face becomes full and flushed, the limbs regain their ordinary dimensions, and the skin becomes smooth and almost tense. The nausea and vomiting abate, the patient is hot and thirsty, and has scanty high-coloured urine. The pains in the loins and back still continue, the headach is generally increased in intensity, and the tendency to delirium greater. The pulse is strong, quick, and bounding, and all the symptoms of high inflammatory fever are present. After some time, a tingling sensation is felt all over the body, accompanied by a degree of moisture, which soon increases to a copious and universal perspiration. With this all the unpleasant symptoms subside; the patient seems to luxuriate in his relief; thirst, headach, fever, vanish altogether; he declares that he is quite well, gets up, and continues in the enjoyment of apparent good health until the next attack.

The length of time which the whole paroxysm may last will vary from one to twenty-four hours. I have seen the three stages pass through their course and subside in the space of an hour; on the other hand, I have known them last for a day—this, however, is very rare.

I told you, in my last lecture, that in this country we seldom observe those violent symptoms which characterise the agues of warm climates. In the bad cases of those countries a train of symptoms occur marked by extraordinary intensity; the patient has violent convulsions and tonic spasms, a wild staring eye, high delirium, excessive vomiting and purging, terrific rigors during the cold fit, and when the hot stage comes on, he frequently has fits resembling epilepsy or apoplexy, and inflammation of the brain, or lungs, or digestive system. Sometimes two or all the great splanchnic cavities are simultaneously affected.

It is generally believed, that in the different types of intermittent fever the paroxysms come on at particular periods:—thus, we hear of the paroxysm of quotidian occurring in the morning, of tertian at mid-day, and of quartan in the afternoon. In Dr. Good's Study of Medicine, a work remarkable for its learning, you will find all these circumstances detailed with an elaborate minuteness, and you will see that the author has considered them of importance sufficient to make a generic difference between the various forms of intermittent. Many of his observations, however, on this subject, betray a want of accurate observation. The truth is, that in every form of intermittent we may have the access of fever at any hour in the day. In the Meath Hospital, we have found that the rule before laid down does not hold good; for we observed that the paroxysms of both quotidian and tertian occurred at all hours of the day and night. Andral, in his Clinique Médicale, gives twenty-five cases of ague, of which eleven that were cases of quotidian came on between four and eleven in the afternoon. Out of seven cases of quartan, one came on in the morning, the rest in the afternoon. These facts show that the rule is by no means so general as has been imagined, and that it is not of sufficient importance to ground upon it any generic difference. There are also many varieties in the complications of intermittent described besides those which are witnessed in this country, but these I am inclined to think as being of very little value, for as yet we have no therapeutic indication founded on the divisions of intermittent fevers *quoad* their type. However, as some of you may be hereafter placed in such circumstances as to find this species of knowledge a matter of importance, I shall make a few observations on the point.

During an epidemic of intermittent fever, you will meet with some cases in which there will be an extraordinary regularity in the access, duration, and intermission of the paroxysms, while, in others, you will find them irregular as to the time of invasion, the phenomena of the different stages, and the period of subsidence, as well as the interval of apyrexia. This is what is called irregular ague, and seems to be the same as that which Frank has described under the title of *febres intermittentes larvatæ*. These are cases in which, to use an expression common in this country, the ague has gone astray. In some instances, we meet with a very peculiar type of intermittent, the double quotidian, or that form in which we have two attacks in the course of a day similar in their phenomena and character. This is a very rare form of the disease; I have never observed it but on one occasion in the Meath Hospital. There is also another kind, which has been called double tertian. In this variety, you have a paroxysm every day, but the coincidence between the nature of the paroxysms and the period of invasion is to be observed only every second day, just as if there were two tertians, each attacking on alternate days. You have a paroxysm every day, one to-day at twelve o'clock, which is of a mild character, another to-morrow at the same hour which will be severe; on the third day the paroxysm is of the same character as on the first, and in this way you have, as it were, two fevers having their access on alternate days. There are some other varieties of intermittent fever, but they are so exceedingly rare, that I will not take up your time in describing them.

The duration of an intermittent fever is subject to considerable variety, but, in general, they are tedious if not interfered with, and apt to assume a more or less obstinate character. Agues which occur in spring and summer subside much sooner, *cæteris paribus*, than those which occur in autumn. Of all forms of the disease, quartan appears to be the most obstinate; there are many cases of it on record which have lasted for years, indeed, it seems to be well established, that it may continue for a great length of time. In one very remarkable case, it lasted for forty years, and, during that time, the patient had his paroxysm every third day. Schenck gives the details of a case in which the patient had quartan from his birth, where, in fact, the disease seemed to be congenital. There is another remarkable one bearing on the same point. A female, who laboured under an attack of tertian ague during her pregnancy, observed that on the alternate days, when she was well, the fœtus appeared to be affected in a very singular manner. Violent convulsive motions of a certain character occurred at fixed periods, lasted for a certain length of time, and then regularly subsided. It would appear, that, in this instance, the fœtus was afflicted with the same disease as the mother, nor is there any thing improbable in the supposition. We have well established cases of the existence of ague from birth, and there is no reason why the nervous system of a child should not be modified in this way, as well as that of the

mother. We know, too, that the fœtus in utero is liable to many diseases, even of a chronic character, and it has been proved that they may have chronic inflammation of the mucous membrane of the digestive tube, abscess, tubercles, small-pox, and many other affections.

I shall say but little with respect to the exciting causes of ague. A common opinion, and one which is taken up by too many medical men is, that ague is generally produced by unwholsome emanations from marshes, or what has been termed malaria, or marsh miasma. It cannot be denied, that in many cases we observe a coincidence between the existence of marsh miasmata and endemic ague; but it is to be investigated how far we are to believe in the existence of any separate and distinct miasm. There are numerous facts to show that other causes, the nature of which is much more easily understood, are capable of producing all the varieties of intermittent fever. Cold and moisture are fully capable of producing ague independently of any miasm whatever. In Sir G. Baker's and Sir Gilbert Blane's writings you will see that, in several instances, no ague was found to exist in the marshy districts, while in hot and dry situations it was endemic. My friend Dr. Dundas, who resided for some time at Bahia, mentioned to me some very remarkable facts connected with this circumstance. The town of Bahia is built in a low marshy valley, which is separated from the sea-shore by a range of high hills. The streets are narrow and filthy, and, being exposed to the direct influence of a burning sun, it has every thing in it calculated to produce unhealthy emanations. Yet it is a curious fact, that, in the town, ague is almost unknown, while, on the neighbouring highlands which separate the valley from the Atlantic, and where the soil is dry, and the air pure, it is endemic. When Dr. Dundas went to reside there, these hills were pointed out to him by the natives, and he was told that there was the ague country. This appeared so strange to him, that he did not believe it until some time afterwards, when he had an opportunity of correcting his error. A merchant who lived in the town with his family, all in good health, was attracted by the beauty of the hills, and wished to purchase a country house which had every advantage of situation to recommend it. Before he removed his family thither, however, he was anxious to have Dr. Dundas's opinion as to the salubrity of the place. On arriving there, Dr. Dundas found in it every thing calculated to apparently promote health, a fine, dry, luxuriant soil, a situation commanding a range of beautiful scenery, an airy house, and a plentiful supply of excellent water. Under these circumstances, he thought he might safely recommend the place, and the gentleman removed thither accordingly. In the course of ten days, the following occurrences took place. The master and one of the servants were attacked with violent intermittent fever; an old female of a low, weakly habit got symptoms of typhus; two other servants were attacked with dysentery, and an European gentleman, who had joined the family a few days after their arrival got intense pneumonia. In fact, almost every individual of the party was laid up with some disease or other. Of this variety of disease, occurring in cases where the exposure has been the same, we have many analogous examples. You will find in the writings of Dr. James Johnston, how an apparently similar case will produce different diseases in different individuals. It may be observed, however, that, although these diseases differ in their seat, they do not differ in their nature, being all referable to the same pathological condition, namely,—irritation of organs.

I shall now proceed to consider the treatment of intermittent fever. Suppose you are called to treat a case of ague, and have ascertained its history, type, and period of access, &c., what are you to do? Here, gentlemen, let me entreat of you to lay this down for yourselves as a rule never to be departed from, that, before you prescribe the slightest medicine, you first make an accurate and perfect survey of the state of the viscera. I do not mean to say that you may not be able in a great many cases to arrive at a proper and successful mode of treatment without taking this trouble, but, if you succeed in many, you will be certainly disappointed in some, if you neglect the state of the viscera; whereas, by adopting this rule, you will always be on the safe side. Depend upon it, that if medical men were to do this more generally than they do at present, it would render their practice more certain, and tend to raise the character of medicine. The great error of medical practice is the absurd habit of prescribing for names and not diseases.

Well, then, the first thing you do is to ascertain precisely the nature of the disease, and see whether it be an original and essential intermittent, or one of a secondary nature and depending upon local lesion. You are aware that we have many cases of continued fever, which are the results of local lesion, and we may, in like manner, have the symptomatic in intermittent as well as in continued fever. Now the whole nicety of treatment turns on this. If the case be one of the essential kind, we know the remedy which will answer, if not in all, at least in the great majority of cases. If it be symptomatic, your treatment must be directed to the removal of the local lesions. It would be wrong to begin the treatment of a case of urinary intermittent by giving bark; it would be equally absurd to pursue the same course in any other intermittent depending on local irritation. It would be only exasperating the disease, at the same time that its cause is allowed to continue. If the patient has come from a situation where ague frequently prevails, there

is a chance that it is a case of essential, and not of symptomatic, disease. If ague be raging as an epidemic at the time, it is very probable that any one particular case is of the same description. But you are not, for these reasons, to conclude that it is a case of essential intermittent; if you did so, without investigating its precise nature, your practice would be empirical, and probably unsuccessful. I recollect on one occasion, after the subsidence of an epidemic fever, we had a vast number of cases of ague in this city. Previously to this period, the few cases we had were generally imported, the patients being in almost every instance poor Irish labourers, who had been engaged during the autumnal season in agricultural labour through the fenny districts of England. These poor fellows frequently exhibited symptoms of ague on their arrival in Dublin, and of such the majority of our patients consisted; but, after the epidemic of 1826, we had a vast number of cases in and about Dublin. At this time we frequently had from a dozen to twenty ague patients in the Meath Hospital together.

During the early part of this period, a patient came in with all the symptoms of well-marked tertian. He had a regular cold, hot, and sweating stage about noon on every second day, and a distinct interval of apyrexia. In this case I made no examination, but, taking it as one of a simple essential character, I put the patient at once on the use of quinine. On the day of the next access, I was surprised to find that the paroxysm was much more severe than the one which preceded it. On the next day I observed that the type had changed, and that it was now a double tertian. This led me to suspect that something was going wrong. On turning down the bed-clothes to make an examination, I was struck with the enormous size of one of his legs, and found that he was labouring under phlebitis, with œdema. I immediately ordered his bark to be discontinued, applied leeches along the limb, and had him put on a strict antiphlogistic treatment. In the course of a few days the swelling of the limb was removed, and the intermittent disappeared. I mention this case to put you on your guard. In entering on the treatment of a case of intermittent, you must investigate several circumstances; first, the character of the paroxysms, and whether they are of a mild or severe description, and how long they last; next, the duration of the whole disease; thirdly, and this is a point of importance, whether the intermissions be complete or not; and, lastly, the nature and extent of the complications. By a careful investigation of these circumstances, you will be able to arrive at the precise character of the disease, and can judge of the probability of the existence or non-existence of internal lesion. In my lecture of Saturday, you will recollect, I stated, that the liability to internal disease was in proportion to the duration of the ague, and the violence of its paroxysms. If the disease be recent, and the paroxysms not violent, there is nothing, perhaps, to contra-indicate the use of bark. By carefully examining the intermissions, you will arrive at some very important conclusions. You will find them either perfect or imperfect. Now, if they are imperfect, if there is not a state of complete apyrexia between the paroxysms, it points out one of two things, either that the disease was from its commencement more of a remittent than of an intermittent character, and consequently less under the influence of bark, or that the febrile condition is kept up by some local internal disease. If you find on examination that in the early period there was complete apyrexia, but that this is no longer the case at the time you see the patient, the great probability is, that it is some organic visceral affection which keeps up the fever during the intermissions. You now proceed to examine the state of the viscera, and first the nervous system. Observe whether there is any headach, lesion of intellect, or stupor; whether there is any affection of the muscular system, any derangement of sensibility, any throbbing of the vessels of the head and neck, or any signs of inflammation of the brain. Go then to the chest, and carefully investigate its actual condition. Here you will derive great advantages from the use of the stethoscope and percussion. In all cases of any considerable duration, never omit making this examination, for in ague, as in continued fever, visceral affections are remarkable for their latency. A patient may have the lung in a very dangerous state, and yet during the periods of apyrexia will not present any remarkable symptom. I have seen cases where the lung was actually solidified from repeated congestion, and yet the cough was but trifling, and the distress of breathing slight during the intermissions; but when you applied the stethoscope to the posterior and lateral portions of one or both sides of the chest, they were found to be completely impervious. You then proceed to examine the belly. See whether it is flat, or prominent and swelled; whether it is tender on pressure, and where this tenderness is greatest; inspect your patient's tongue, and ask him has he thirst, nausea, or diarrhœa; observe whether the solid viscera of the abdomen are enlarged or not, and carefully note the condition of the liver and spleen. It is necessary to make this examination in every suspicious case, and you can do it easily and rapidly. In the majority of cases which have lasted for any considerable time, you will hardly fail to detect some internal lesion.

Here we arrive at a very important question. Does the existence of any amount of visceral lesion necessarily contra-indicate the use of bark. The answer to this question is, —the mere existence of visceral lesion does not contra-indicate the use of bark, if the lesion be slight and recent, and does not keep

up febrile irritation after the cessation of the paroxysms. If the lesion has not arrived at that state in which it becomes reciprocally cause and effect, it does not present any obstacle to the employment of bark. A slight degree of bronchitis may be present, but you should not on that account suspend the use of the specific; a trifling enlargement of the spleen may exist, but this should not alter your practice. In these cases the lesions are trifling, and do not react on the system, and in all such cases bark may be given with a reasonable prospect of success.

I shall commence the treatment of ague by at once recommending to you its great specific. If there is anything in medicine which deserves the name of a specific, it is bark in ague. I do not mean to say that this is to be received in the full sense of the term, for there is no such thing as a complete specific. There are many cases of symptomatic ague made worse by bark, and the same thing is to be said of cases of essential ague, where the local lesions stand in the light of cause and effect. The more the case is free from visceral disease, the more simple and essential in its character it is, the more certain will be the action of quinine. Many persons commence the treatment of a case of ague by unloading the bowels. To this practice there is no objection, and it has many advantages. It is not, however, absolutely necessary, and may sometimes be dispensed with; but if you do it gently, avoiding strong irritating purgatives; it is an excellent mode of preliminary treatment. You may give the bark in large doses at considerable intervals, or you may give it in small and frequently repeated doses. There is some difference of opinion as to the comparative value of these two modes. Our experience with respect to this point is, that you will cure an intermittent more certainly, easily, and with less loss of quinine, by giving it in large doses at considerable intervals. Thus, if you treat a case by giving ten grains of sulphate of quinine in a single dose once a-day, you will cure your patient sooner than if you gave the same quantity in a day in divided doses.

You will find it stated in books, that the interval between the paroxysms is the best time for giving bark, of this there can be no doubt; not because the powers of bark are greater at one time than another, or that they are impaired during the paroxysms, but it is difficult to give a patient in that state any kind of medicine, for the stomach is generally irritable, and will not bear it. But it is a fact that you can give it at any period, and it is remarkable how rapidly its febrifuge properties will sometimes act. There is no doubt that its effect may be, to a certain extent, produced in the course of an hour. I have seen cases with bad paroxysms to-day, and on the next day have observed that a dose of quinine given during the paroxysm has produced a sensible effect.

It is a matter of little consequence what way the quinine may be administered. You may give it in pills, in solution, or in the form of enema. The latter seems to be the most convenient mode of giving it to children who will not swallow the pills or the solution. If you take four ounces of water, four grains of sulphate of quinine, a few drops of dilute sulphuric acid, and a few drops of laudanum or liquor muriatis morphiæ, you have an excellent febrifuge injection, and you can vary the proportions of quinine and opium according to the age and condition of the patient. In employing this injection, you should recollect that it is given to be retained; the bulk should therefore be small, and it should be of a medium temperature, neither hot nor cold. If you find on the following day that the paroxysm, instead of coming on at twelve, is delayed until two o'clock, it is a sign that the bark is acting favourably; if, on the next accession, the paroxysm is still farther protracted, you may be sure the patient will soon get well. In some cases the disease has been cut short by giving a single large dose, but as far as I can judge, it appears to me that the best way is to remove it gradually. It is a curious fact, that when the ague has been arrested at once, new local diseases have supervened. In all cases, therefore, where the symptoms have rapidly and suddenly disappeared, you should be on the look-out for new symptoms.

Of all remedies for ague, quinine appears to to be the best. I have made a number of comparative trials of sulphate of quinine, Fowler's solution, and the per-ferro-cyanuret of iron. All these remedies were found to have a good effect; among them, however, quinine holds the first rank, next in value is Fowler's solution, and then Prussian blue. I may remark here, that the introduction of Prussian blue is a great improvement in medicine. It may be given with safety, it is a remedy of no ordinary power, and from its cheapness is particularly adapted for dispensaries and institutions where the funds are limited. We have given it in doses of from a scruple to half a drachm three times a day, and though it is inferior to bark, still it is a remedy from which much advantage is derived.

At our next meeting I shall speak of the endermic mode of using quinine, and lay before you some curious researches on this subject made in France, and these, with a few additional observations, will conclude the treatment of intermittent fever.

LECTURES

ON

MIDWIFERY & THE DISEASES OF WOMEN AND CHILDREN,

BY EDWARD RIGBY, M.D., F.L.S.,

ASSISTANT PHYSICIAN ACCOUCHEUR TO THE GENERAL LYING-IN HOSPITAL.

Delivered at St. Thomas's Hospital.

LECTURE IV.

Menorrhagia—Leucorrhœa.

GENTLEMEN,—From the varieties of causes which I have mentioned, it will be evident that the success of our treatment in menorrhagia will mainly depend on our correctly ascertaining what has produced the evil. The *active* or *passive* character of the disease must also be taken into consideration. In active menorrhagia our treatment will be very similar to that of uterine hæmorrhage from abortion. The power of the circulation (if not already weakened) must be moderated, and such means taken as shall diminish the congestion of blood to the uterus, and either by producing contraction of the vessels which open into the cavity of the uterus, or by favouring coagulation to stop the hæmorrhage. Where the quantity of blood which has been lost is not very profuse, where the patient still complains of throbbing, or of weight and heat in the pelvis; where the face is flushed, the skin hot and dry, and the pulse resisting, venesection from the arm will be necessary. The patient should be placed upon a mattress and lightly covered; in fact, the abdominal and pelvic regions should be kept as cool as is compatible with her safety. Cloths wrung out of cold water, or vinegar and water, should be applied to the loins and vulva, and injections of cold water thrown up the rectum. This latter is of great importance, for thus we not only succeed in applying cold almost directly to the fundus uteri, but frequently are enabled to dislodge a mass of hardened fæces from the rectum, which must have greatly impeded the return of blood from the pelvis. Whenever an opportunity is permitted us of examining, per vaginam, in a case of menorrhagia, we should not omit to ascertain the condition of the rectum as far as we are able, for we shall frequently find it distended into a hard solid cylinder from accumulated fæces. Besides these means, the cold hip-bath, injections of cold water into the vagina, dashing cold water upon the abdomen, and even the introduction of pieces of ice into the passages, will prove very powerful remedies. The steady application of cold is a powerful sedative, but its action requires to be carefully watched, for we may thus lower the system too much, and produce mischievous effects. Where the discharge has been very profuse, and the patient much exhausted by it, we should be especially careful to attend to this point; for it frequently happens, that, by the time the hæmorrhage has ceased, such a degree of collapse is produced as to require not only the application of artificial warmth to the extremities, but even the cautious exhibition of stimuli to rouse the heart and arteries to a proper degree of action. During all this, the greatest quiet both of body and mind should be enjoined, the air of the apartment must be kept as cool as possible, and no other person allowed to be present but those who are absolutely necessary to attend upon the patient. Where great exhaustion has been already produced, and the discharge still continues or threatens to return, we must not delay any longer to plug the vagina. The easiest and most effectual means of plugging the vagina which I know of, is by introducing a piece of soft sponge which has been wrung out of pretty sharp vinegar, as recommended by Dr. Dewees, or moistened with any astringent fluid. It is passed up and removed with perfect facility, nor does its presence excite the uneasiness and pain which is so frequent a result of plugging with a napkin, as commonly directed. This latter species of plug, from the distension which it produces, frequently brings on great irritation, and even violent bearing-down pains; and when once this is the case, you may be certain that it is doing much more harm than good; whereas the sponge plug may be retained for hours without any uneasiness; the blood circulates through its numerous cells, which being moist with vinegar causes it to coagulate very rapidly, and entangles the fibrine so effectually as to form a firm tough coagulum, and therefore a precise imitation of the means nature makes use of for stopping hæmorrhage. After some hours the plug may be cautiously removed, and the vagina washed out with cold water, or a weak solution of alum, acetate of lead, &c., to dislodge any coagula which may be present, and which, by their becoming putrid, are apt to cause much irritation. If the hæmorrhage return the plug must be again applied.

Where the discharge assumes the passive character, the antiphlogistic treatment just described is rarely admissible; the powers of the system are already too much weakened by the loss it has sustained to bear any further depletion, and the application of cold must be made with much greater caution than in the preceding form. Astringent injections into the vagina will here prove of much service; they seem to act partly by coagulating the blood as it comes from the open mouths of the uterine vessels, and thus rendering them impervious, and partly by inducing a still further degree of contraction in the uterus itself (which is probably more or less relaxed in passive menorrhagia), and thus compressing their trunks. Solutions of acetate of lead, alum, acetate and sulphate of zinc, sulphate of copper, with or without decoction of oak or elm bark, &c., are powerful astringent remedies. In extreme cases, Dr. Locock has injected

even the uterus itself with a small quantity of acetate of lead or alum in solution, but the remedy, though very certain, is a hazardous one, for in two instances it was followed by vomiting, uterine inflammation, and death. Where the discharge depends upon polypus or inversion, the case must be treated accordingly.

In the exhibition of medicine internally, our treatment must also be guided by the active or passive character of the disease. In the active form I know of no remedy which appears to possess such a control over the discharge as the acetate of lead; and, in the hands of Dr. Dewees, it has been given to an extent not less remarkable than the success which has followed this treatment. "We know," says Dr. Dewees, "that the acetate of lead sometimes produces the most decided effects, let the mode of its doing so be what it may. In many instances it seems to exert a control over the bleeding vessels as prompt as the ergot does upon the uterine fibre." Combined with opium it is a very valuable remedy, and stands far above all other astringents, such as alum, sulphate of zinc, kino, catechu, &c. In spite of the prejudice manifested against the internal exhibition of the acetate of lead, on account of its poisonous qualities, it has been given in large and repeated doses, without any ill effects whatever, and with the happiest results. It has been, moreover, ascertained by Dr. A. T. Thomson, that an excess of acetic acid entirely removes its deleterious qualities, so that, by using this precaution, it may be given to a considerable extent without any danger. Nitrate of potass has also been much recommended in active menorrhagia, and is much more freely used upon the continent than in this country; it certainly does possess remarkable powers in lowering vascular action and febrile heat, and has not, I think, been so appreciated by the English practitioner as it deserves. Digitalis, so praised by some authors, appears, nevertheless, to be a very questionable remedy; its effects upon the circulation are always uncertain, and sometimes so hazardous as to produce the most alarming symptoms, in spite of our greatest caution.

The mineral acids, especially the sulphuric, are useful remedies, for they not only lower the temperature of the body, but appear to act as astringents. "The fact has been long admitted (says Dr. Stevens in his admirable work on the blood) that the acids reduce the force of the circulation." This has been accounted for in various ways, but my belief is, that they reduce the excitement of the whole system, and act as sedatives, by lessening the stimulating power of the vital current. The bowels should be kept open by cooling saline laxatives, and perhaps nothing is better adapted for a case of this sort, especially where it is assuming the passive form, than a weak solution of Epsom salts in infusion of roses, acidulated with sulphuric acid. Dr. Locock observes that "the next return of the menstruation may be rendered comparatively trifling by the use of a full purgative about 24 hours before the period, when that can be ascertained, avoiding every medicine of a drastic, stimulating quality*." Where the disease has completely assumed the passive form, the system becomes so weakened and exhausted as to require much attention in restoring its tone during the intervals, for by doing this, we can only hope to restore the uterus to a healthy condition.

Besides the internal use of the acetate of lead, the cold hip-bath, injections, &c., already mentioned, the salts of iron, combined with vegetable tonics, may be cautiously administered during the intervals, and act most beneficially to the general health. The cold salt-water bath will be found very useful here, or if this cannot be easily procured, the use of towels impregnated with salt, as recommended by Sir C. M. Clarke, or of the flesh brush, will restore the circulation of the skin to a healthy condition. All violent exertions must be avoided, and exercise on horseback, which proves useful in the other forms of deranged menstruation, would, in the present case, be almost sure to bring on a return of the discharge. Still, however, moderate exercise should be regularly taken, if possible, and every means used to restore the tone of the system.

Where there is much torpor of the hepatic system, and where the disease appears to be dependent on, or, at least, kept up by, a congested state of the liver, mild alterative doses of mercury will be necessary, such as hydrarg. cum cretâ, blue pill and soda, or Plummer's pill, at longer or shorter intervals, as occasion may require. The combination of gentian and nitric acid will here also prove useful, and, under these circumstances, Dr. Locock has recommended pills of rhubarb, soap, and ipecacuanha, with full doses of the infusion or extract of taraxacum.

So much, gentlemen, for the various derangements of the menstrual function. They form a very important part of the diseases which the obstetric practitioner will have to treat, and upon a correct diagnosis of their symptoms, and a proper estimate of their causes, will his practice have the best chance of proving successful. They are, it is true, seldom attended with immediate destruction of life, but, on the other hand, they frequently lay the foundation of permanent derangement, and organic disease, under the accumulated sufferings of which the system at last yields.

We now proceed to the consideration of *Leucorrhœa*. The derivation of this word, I need hardly say, is from the Greek words λευκος, white, and ρεω, to flow, the *fluor albus* of the Latin authors, *les fleurs blanches* of the French, *der weisse fluss* of the Germans, Anglicé, *the whites*.

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* Cyclopæd. of Pract. Med., art. Menorrhagia.

The vagina, you are aware, is moistened by a mucous secretion, which is furnished by the membrane lining the canal, and, like the mucous membranes of other distensible cavities, presents a corrugated appearance. This corrugated appearance results from the state of tonic contraction which the muscular or proper coat of the vagina preserves in a healthy condition, and, therefore, the number, size, and firmness of the rugæ formed by the mucous membrane lining the vagina, are a very fair criterion of the state of the patient's general health. Hence we see that where the health has been impaired, or the powers of the constitution weakened by any debilitating cause, the vagina loses its tone, becomes flabby and relaxed, and the rugæ disappear; thus in profuse hæmorrhages, in menorrhagia, in cachectic diseases, the lining membrane of the vagina presents a perfectly smooth surface; on the contrary, these rugæ are most numerous and well-marked in young unmarried females, where the system is in its full vigour of health, and where the vagina has never been dilated. The secretion from the mucous membrane of the vagina bears an inverse proportion to the degree of its corrugation, being very trifling in children and young unmarried females, but much more profuse in women who have had large families, and whose vagina has been repeatedly dilated by the passage of the child. The reason for the secretion being less in proportion to the number of rugæ, is as follows: as long as the muscular coat of the vagina preserves that state of tonic contraction which is the peculiar characteristic of health, it keeps up a continued pressure on those arterial trunks, the minute branches of which pass on to the lining membrane, to supply its mucous secretion, and hence, gentlemen, you will perceive that the greater the contraction of the vagina, and consequent number of its rugæ, the greater must be the pressure upon the trunks of the secreting arteries, and the less must be the quantity of blood which can reach the lining membrane, and in like proportion must necessarily be the quantity of mucus secreted. On the other hand, where the tone of the vagina has been impaired by general debility, or by frequent parturition, its rugæ diminish in number, and its muscular coat no longer preserving a state of contraction, it ceases to exert the pressure on the secreting vessels which it formerly did, hence much more blood is sent to its lining membrane, and the mucous secretion is consequently increased.

In the same manner, we see that when any foreign body dilates the vagina its mucous secretion is greatly increased, not so much by the irritation which it produces, as by the pressure being no longer exerted upon the column of blood in the secreting arteries, from the muscular coat of the vagina being put upon the stretch. The fact of the vaginal rugæ disappearing in old age, and being accompanied by a *diminished* mucous secretion, may be explained from the fact, that the determination of blood to these organs ceases with their functions, that they become considerably diminished in size, and that some of them, viz. the ovaries, even shrivel. In the fenny districts of Holland, and in the hot climates where the system is much relaxed, we find the mucous secretion of the vagina to be much more copious than in this country. Hence it will be evident that the simplest form of leucorrhœa is a mere increase of the natural secretion from the mucous membrane of the vagina; it becomes more abundant than in health, but retains its character of mucus, being clear, transparent, colourless, and glutinous to the touch; this rarely goes on to a great extent without being altered in its appearance and much more watery.

It is well-known that no organ exerts such a general influence over the whole system as the stomach; by derangement of its function, there is no organ, however distant, which may not sympathise, no set of symptoms, however anomalous, which may not be produced. "When the functions of the stomach are disordered, and sometimes, when only in a very trifling degree, the breasts become softer and more flaccid, and the gland itself seems altogether gone, and this, too, when the tone of the system generally is not much diminished, or the size of the other parts at all shrunk, in this case the return of the firmness and former size of the gland becomes the strongest mark of the returning health of the stomach *." One of the most peculiar effects of disordered digestion is the loss of that tone which is characteristic of health. The muscles lose their power, the limbs ache, and fatigue is induced by the slightest exertion; the skin is loose and relaxed, and is either dry and rough from want of due activity in its capillary circulation, or pours out a profuse perspiration, which, from not being produced by that degree of exertion which is requisite for its secretion in health, is accompanied with a cold and clammy state of the surface, which must be familiar to you all. In men, the cremaster muscle loses its power, the scrotum becomes flaccid, and ceases to present that corrugated appearance which is the well-known characteristic of health. In like manner does it exert similar atonic effects upon the vagina of the female; it becomes relaxed and loose, the rugæ are flaccid, and in part disappear, and from the reasons which I have already assigned, a considerable increase of its mucous secretion follows. Many of these sympathies are reciprocal; in certain affections of the brain (as Sir C. Clarke observes) there is sickness of the stomach, and in a disordered state of the stomach pain is felt in the head; if a man receives a blow upon the testicles, sickness of the stomach comes on; and, on the other hand, when the functions of the stomach are deranged, the passions connected with and dependant upon

* Sir C. M. Clarke, on Diseases of Females.

the testicles are dormant. Between no organs is the sympathy so remarkably reciprocal as between the stomach and uterine system. "The influence of the uterus upon the stomach is one of the most remarkable of all the sympathetic affections between this organ and any other. In cancer of the uterus the stomach is always more or less affected with vomiting. When the uterus has been ruptured, vomiting comes on, and the matter rejected is of a black colour, resembling coffee grounds. In amenorrhœa, the symptoms which belong to the stomach constitute a very important part of the disease. In dysmenorrhœa, or painful menstruation, sickness and vomiting are present during the acute stage, and the effects of impaired digestion or disease of the chylopoietic viscera distress the woman in the intervals between the periods of menstruation *." Thus you see, gentlemen, how important it is to be thoroughly acquainted with the peculiar relation as to cause and effect in diseases of the uterine system; to pursue and investigate the hidden links of sympathy existing between these organs and the other parts of the human system, is to my mind one of the most beautiful and certainly the most practically useful species of research which pathology offers to us. Without this knowledge, we are continually liable to do infinite mischief, and with its assistance diseases the most intractable yield with a degree of ease and facility which can scarcely be credited. Leucorrhœa is not always the result of debility, although debility is a never failing consequence of leucorrhœa; it is frequently accompanied with an inflammatory state of the vagina and uterus. The discharge is "opake, of a perfectly white colour, and it resembles in consistence a mixture of starch and water, made without heat, or thin cream. This discharge is easily washed from the finger after an examination, and it is capable of being diffused, through water rendering it turbid. A morbid state of the glands in the cervix of the uterus probably gives rise to this discharge, at least in cases in which it comes away the symptoms are referred to this part, and when pressure is made upon the cervix uteri under such circumstances, the woman complains of considerable pain †." A watery discharge, resembling serum, is a very common result of more acute inflammatory action in the mucous surface, and in general appears suddenly as the effect of cold, or any other active excitement; it occasionally becomes very abundant, is attended with much local heat and soreness, and soon becomes puriform or mixed with purulent matter, and sometimes with bloody streaks. When it is fœtid, brown, or coming away in violent gushes, organic disease of the uterus is to be feared, the nature of which can only be detected by an examination per vaginam. The symptoms will of course mainly depend upon the peculiar form of the disease; and, from what I have just stated to you respecting the different appearances which the vaginal discharge presents, you will see how important it is to pay attention to these points, in order that you may form a correct diagnosis. If you have recollected what I have said respecting the sympathies which reciprocally exist between the uterus and stomach, you will be able almost to anticipate my description of the symptoms which characterise the simple form of leucorrhœa. The face is pale and sallow; she complains of much debility and depression of spirits; the pulse is small, feeble, and easily excited; the very exertion of walking up stairs exhausts her, she is breathless, her heart palpitates, and she feels as if her knees would sink under her; her appetite is capricious; her sleep unrefreshing; the bowels deranged; in fact, every symptom of gastric disturbance is present. She has a dragging pain in the back whenever she stands or walks for some time, but it is not constant, and is relieved by taking the horizontal posture. It is produced by the vagina becoming too relaxed to support the uterus in its usual situation; it therefore descends lower in the pelvis, and produces the painful dragging sensation above mentioned. There is no local pain but this, and the discharge is purely mucous.

On the other hand, where the discharge depends upon an inflammatory action of the vagina and uterus, the symptoms are very different. In these cases there is much pain of the back, extending round the hips and down the thighs; and, though relieved, not removed, by the recumbent posture. The discharge here generally presents the same appearances as that from the Schneiderian membrane of the nose does in a common catarrh; it is at first profuse and watery, but by degrees becomes thicker and purulent; the vagina is hot, very tender to the touch; there is much fever, heat of skin, quickness of pulse, these symptoms being often preceded by a distinct rigor.

Where the discharge is more scanty, and has that peculiar cream-like appearance and consistence which I have already described, and which was first pointed out by Sir C. M. Clarke, as proceeding from an inflammatory condition of the glands of the os and cervix uteri, we find the sensibility of the vagina little increased, but the cervix uteri is enlarged, hard, hot, and the minute arteries are distinctly pulsating; it is extremely painful to the slightest touch of the finger, and pressure upon it frequently makes the pain shoot into the hollow of the back; the uterus also is felt larger and firmer than usual. All these forms may end in chronic leucorrhœa; where the discharge is more or less profuse and constant, mucous or purulent, or a mixture of both; it may become green and offensive, and yet be the result only of functional disorder; nevertheless, as far as my own experience goes, I have seldom seen a discharge of this character continue long with-

* Clarke, op. cit. † Clarke, op. cit.

ont organic disease. In one case I have found it accompanied with an indurated, tubercular condition of the vaginal portion of the uterus, more resembling lupus of the nose than any thing else; but, having seen as yet only one instance of this sort, I am unable to give any opinion respecting its precise nature. The quantity of discharge in chronic leucorrhœa is sometimes very profuse, amounting even to a pint or pint and half in the twenty-four hours. In cases of this sort, the patient is frequently surprised by a sudden gush of discharge in considerable quantity; this results from its having collected in the vagina whilst she was in the supine posture, and escaping when she turns on her side or rises. In some of these cases the discharge seems to come from the uterus, and then it is generally connected with some organic disease. In the more common form of chronic leucorrhœa the vagina is very flaccid, and appears nearly or wholly to have lost its power of contraction; its rugæ have completely disappeared, it presents a smooth, even surface; this condition is generally accompanied by prolapsus uteri, the vagina in this relaxed state being no longer able to support the uterus in its proper position; there is great emaciation and debility, the eyes are hollow, the face pale and chlorotic, the pulse feeble and rapid, the feet often anasarcous, the respiration short and laboured, to which succeed palpitations of the heart, dragging pain in the back, inability to exertion, profuse nocturnal perspirations. Unless the remedial measures be successful after a protracted scene of much general suffering, the patient dies exhausted.

The hour is expired, gentlemen, and I still find myself at a considerable distance from the conclusion of my subject, which I must therefore delay till our next meeting; in the meantime, I recommend you to read that part of Sir Charles Clarke's first volume, which treats on the nature of leucorrhœa, for it contains much original and highly valuable information. Dr. Locock's article on Leucorrhœa, in the Cyclopædia of Practical Medicine, is also well worth your perusal.

LECTURES
ON
FORENSIC MEDICINE,
DELIVERED BY
DR. HAY GRAHAM,
At the Westminster School of Medicine.

AN ABSTRACT OF LECTURE II.

Physiological Considerations of the Ages of Man.

After premising some remarks on the legal department, the Doctor proceeded to the physiological considerations of the ages of man.

The word "*ætas*" or *age*, gentlemen, is applied to mark those changes which organised matter undergoes during the brief period of its existence. Nothing is stationary in nature. During the lapse of time which intervenes between the cradle and the grave, there is one uninterrupted succession of changes, each of which stamps its own character, both physically and morally, on mind and body.

The celebrated Dr. Gregory remarks, in his Conspectus, that such are the changes brought about by age, that a man is not so much unlike to others of the same age as himself as he is unlike to himself at different ages of life, both in appearance, in strength of body, in vigour of intellect, and even in the very secretions and functions of that body.

As a watch when wound up will, barring accidents, go for a given length of time, and mark each period of its progress, so is man, when he comes into the world, destined to live a certain period; at the end of which period, the living principle being exhausted, and the machine worn out, man sinks into the tomb.

"Nascentes morimur, finisque ab origine pendet."

The germ of death buds with the germ of life; from our very birth we may be said to begin to die; and the very end of life is involved in the act of conception.

These changes deserve your attention, not only in the study of forensic medicine, but also in a purely scientific or physiological point of view.

Man and all other animals having the power of repairing their daily loss by rest and food, would at first sight seem to be calculated to live for ever; for the machine that is capable of winding itself up, as need may require, possesses within itself the principle of perpetual motion. If man issued from the bosom of nature, as Minerva is said to have sprung forth from the head of Jupiter, perfect and armed at every point, it might have been so; but man at his commencement, when first conceived, is an invisible point; those very mutations, by which his organisation is completed, and his body and mind gradually developed, of necessity lead him to his end.—"Finisque ab origine pendet." The circle is the correct emblem of eternity, for there each point corresponds. Such is the motion of the spheres, and such are the laws of nature. Individuals perish—man grows old and dies, but the species flourish; for nature moves in a circle, and is ever fresh and young. To carry on the simile:—That which moves in a straight line must of necessity come to an end, for no point corresponds; either the projectile impulse becomes exhausted, or the body meets with some impediment, which puts a period to its further progress. Thus is it with individuals; when the impulse of vital action becomes exhausted, the action ceases; or otherwise, the accidents of violence or of disease form an impediment, which puts a period to the further progression of life.

These changes to which man is subject are gradually brought about in the course of time,

imperceptibly, but constantly — daily and hourly. Each moment of our existence we cease to be what we were—we change.

Length of time and the number of years serve only to ascertain the physical age of man, by the development of different organs taking place at different corresponding periods. The development of these organs, and other changes which are observed to take place, may be accelerated or retarded by a variety of circumstances; but no circumstance can interrupt the order of those mutations, which invariably, between the periods of birth and death, change the physical condition of organisation. It is therefore proper to fix the distinction of ages physiologically, on the phenomena of organisation, rather than on the lapse of time and the number of years. It is of little consequence, in a scientific point of view, whether a man, who dies of old age, finishes his career at threescore, or lives to be fourscore and ten; since the one as well as the other has passed through those different epochs of life, those different ages, which, in either case, are essentially the same, and only differ in the rapidity of their course. Bebe, the dwarf of the king of Poland, died when he was twenty-three years old, and, in that short space of time, he had arrived at the most extreme old age. Consequently, the ages which measure the interval between the origin and the natural end of a living being, have no fixed bounds in themselves, but vary, in each being, according to the duration of its existence; that life may be of short duration in comparison to some, which is of extreme length in comparison to others. Some insects have already become very old at the setting of that sun which beheld their birth; while the cedar of Lebanon or the baobab of Africa is still young after the lapse of many centuries.

We learn by observation that all living bodies, especially man, have at their birth, or origin, peculiar characters impressed upon them, which they retain during the period that constitutes their infancy. These characters are effaced by others which mark the stage of youth, and continue until the organisation has acquired that degree of development and perfection by which the age of virility or manhood is distinguished. This period is of greater or shorter continuance, and is at length followed by the phenomena of old age, the age of decline.—*Dic. Med.*

Some authors divide the career of life into only two periods, that of growth and increase, and decline and decrease; others divide it into six; Aristotle into three, that of *growth*, that which appears *stationary*, and that of *decline*, while others, addicted to a superstitious belief in the mystery of numbers, have divided it into five, seven, and ten. But the Pythagorean number, seven, has been generally adopted, and received the authority of Hippocrates. In this country, the seven ages of man have been immortalised by our illustrious bard, and it is a species of heresy to popular belief to prefer any other division, and as there is some truth in the septenary division, we will take a cursory view of it. 1st. It consists of infancy, from one to seven; 2nd, of boyhood, from seven to fourteen; 3rd, of puberty, from fourteen to twenty-one; 4th, youth, from 21 to 35; 5th, manhood, from 35 to 56; 6th, old age, from 56 to 70; decrepitude, from 70 upwards.

The great changes, according to this system, took place at 7, 14, 21, 49, and 63. The three first hold strictly in fact, and correspond with 1, 2, 3, which were considered to form a mystic number; 3 times 7 completed the growth of the body. The next was considered a very important and critical period, a climacteric period of life, being the multiple of 7; 7 times 7 making 49. The next was "par excellence" the *grand climacteric*, the age of 63, or 9 times 7. 9 was a number of great virtue, being the multiple of 3, and 3 was ever considered a mystic number of peculiar sanctity. Thus 7 multipled by 9 had all the additional force and value of arithmetical progression from the number 3, and this conjoined with its own intrinsic value. This period of life was considered highly critical; it formed a barrier which was approached with fear and passed with difficulty. Thus Augustus desired his nephew Caius to celebrate his nativity with rejoicing, as he had escaped the danger of 63. This division of ages has some foundation in nature; at 49 man becomes subject to a new train of diseases, and woman has ceased to be capable of child bearing; at 63 he feels the weight of years, "nec alma Venus semper placet."

The term of life allotted by the Psalmist is the multiple of 7 by the perfect number of 10; this forms the consummation of our career. All beyond *that* is a blank, 'tis the age of decrepitude. The intellectual man has ceased to exist. It "is second childishness and mere oblivion,"—a gradual extinction of the senses, which fitly and gently prepares him for the tomb.

Yet it is remarked, that "not more than one in eighty reaches the tottering confines of mortality, and it has been correctly stated that one half who come into life, leave it again before the expiration of their *eighth* year; of a *thousand* children born in London, *six hundred and fifty* die before the age of *ten*. It has been computed by Herodotus, and acknowledged as correct by our ablest authors on political arithmetic, that three generations of men pass away in a century, and, consequently, the whole human species cannot be said to divide one with another, more than *thirty-four* years of existence."—(*Paris*, vol. i., p. 179.)

In taking a cursory glance at those changes which age produces in the constitution, I shall merely notice such as are the most obvious, for to enter minutely into their detail would not only occupy a larger space than I can devote to the subject, but would, at the same

time, be encroaching on the province of another chair.

Infancy.—Infantia (from "*infari*," not able to speak), is divided into three stages;—1st, from birth to the seventh month, 2nd, from the seventh month to the second year, and 3rd, from the end of the second year to the seventh year.

In the first stage, life may be said to be merely organic; the eye is but little sensible to light, and the sense of hearing is obtuse. The child passes two-thirds of its time in sleep, and the other third principally in taking nourishment at the breast.

At six or seven months, dentition usually commences; "the middle *incisor* teeth of the inferior jaw make their appearance; soon afterwards the corresponding incisors of the upper jaw. About the twelfth or fourteenth month, sometimes sooner, the first of the *molares*, or grinders, of the under, then the corresponding teeth of the upper jaw appear; the four *cuspidati*, or canine teeth, are usually protruded through the gum the last; thus the *cuspidati* and the second molars will sometimes appear at the same time, and this is usually between the twentieth and twenty-fifth month; so that at, or some time after, *two years of age*, the twenty temporary, or *milk* teeth are to be found. It must, however, be remembered that the formation and appearance of the milk teeth are subject to considerable variety; and there are some examples on record, though very uncommon, of children born with two incisors in the upper maxilla, but such teeth have been found to be imperfect in their structure, and without fangs, and they have consequently soon been detached; in other cases, children, although enjoying perfect health, have not cut a single tooth until the end of the second year."

"Scrofulous and rickety children very commonly present an aspect of intellectual precocity, by no means commensurate with their age; and hence the popular notion has arisen, that very intelligent children rarely continue to live." Thus Shakspeare makes the Duke of Gloucester, afterwards Richard III., say of his nephew, the Prince of Wales,—

"So wise, so young, they say do ne'er live long."

Pueritia, second infancy, boyhood, presents only one stage, spreading over the interval of seven years. "Dedentition, or the shedding of the temporary or milk teeth, commonly commences in order to make room for the adult set; and this event marks the arrival of the second period, which, in its turn, is terminated at *fourteen* or *fifteen* in boys, and at *twelve* or *thirteen* in girls."

In respect to the constitution, each age or period of life has its own peculiar marks. Thus the pulse of an infant beats more than one hundred times in a minute, whilst that of an old man does not give more than sixty-five pulsations. It would be a most unpardonable error to mistake this physiological state of infancy for a pathological state of disease. It should also be borne in mind, that the mutation brought about by one age sometimes becomes the means of cure for the diseases of preceding ages.

The growth, the constitution, the generative faculty vary in a most especial manner in different ages. In respect to growth, as I have already observed, Aristotle divided the ages of man into three epochs, viz.—of growth, of a stationary or intermediate state, and of decline. But it does not appear that there is any such stationary state, which was placed between 35 to 50, for no one can compare a man of 35 with a man of 50, either in external appearance, or in the strength of body, or in the activity of his organs. But, in respect to growth, there are two divisions perfectly distinct, viz.—that of increase to that of decrease; for as soon as the body has ceased to grow, it may be said to begin to decline; yet the transition in this division, like every other, is gradual and imperceptible. Each age passes into the other like the evanescent tints of the rainbow; the line of demarcation is faint and not to be distinguished, yet the colours are vivid and perfectly distinct.

In respect to the exercise of the functions of generations, there are three well-marked ages,—that in which they have not yet begun to be exercised, that in which they are in full activity, and that in which they have ceased to operate. These three periods are better defined in the woman than in man; for it is not uncommon to find old men still possessed of the power of reproducing their species, whilst in women the cessation of the menses is accompanied with the loss of this faculty. In speaking of the ages of life, we may observe, that the ancients recognised a resemblance between the seasons of the year, the time of day, and the different epochs of life. In familiar language we still use the poetic expression. Thus infancy and youth are still said to be the dawn, the morning, or the spring of life; the meridian, noon-day, and summer answer to adult age; and the evening, or autumn, represents approaching old age. The fruit is ripe and the harvest is collected, our children are grown up and our labours finished, whilst winter is too true an image of the decrepitude of old age. The leaves are fallen, the trees are but the skeletons of their former selves, and, instead of their leafy honours rocking to the blast, they groan beneath the weight of hoary snow, the sources of nature are fast bound in frost, and in contemplating the scene the mind participates the numbing chilness of the body; and such, indeed, is the winter of life.

The external appearance of the body, whilst gliding down the stream of life, assumes a thousand fugitive forms. The Protean changes of shape pass unheeded by the vulgar, except to mark the number of years which time has stamped upon us; but, to the man of science,

they are unerring marks of those deep-seated metamorphoses which the uninterrupted succession of the chemico-vital action of combination and decomposition produces on our organs. It is this continual chemical action, this change of particles, the removal of some and the apposition of others, the attraction of assimilating affinities, which constitute the wear and tear of life, and the series of which developes, maintains, and ultimately destroys our existence.

The new-born infant is generally about from seventeen to twenty-one inches in length, and weighs from seven to eight pounds; the skin is of a rosy colour, is covered with a greasy unctuous substance, which not only protects the skin from the injurious action of the air, but also facilitates its passage during birth in gliding into the world. The abdomen and the cranium are remarkably voluminious in comparison to the rest of the body; the pelvis and the inferior members are comparatively much smaller than the thorax and superior members; hence the new-born child crawls on all fours. The general appearance is weak and fragile, the hair of the head is very short, and the skin is frequently thickly covered with down. Soon, however, the body increases, both in size and in firmness, which progessively continues to about the age of twenty-one. The form loses its roundness, and shoots up in graceful proportions; the head, taking on a proportionate growth, appears smaller; it becomes covered with hair, generally of a light colour in early years, but becomes darker subsequently; the inferior members grow longer, and the pelvis is developed. The separation of the umbilical cord leaves an indelible mark on the abdomen. From the age of fourteen to sixteen the organs of generation, which had hitherto remained nearly stationary, suddenly acquire a large increase of volume, sometimes more than double their former size, at the same time they become surrounded with hair, which also appears in the axilla in both sexes. A light down, like the bloom of the peach, adorns the cheeks of the youth; this soon gives place to a beard, more or less thick-set, and dark or reddish, and which is an incontestable proof of strength, manhood, and virility.

The figure now assumes a corresponding expression; the sentiments, the wants, and the thoughts are depicted on the countenance; the body, slim and supple, acquires more breadth and stability; the skin loses its delicacy of complexion; the hair grows darker, the muscles become firmer, the limbs more voluminous, the thorax and the pelvis are rapidly developed to a sensible extent, the body becomes, in the male, hairy, as also the limbs; the mammary glands swell, and sometimes become painful. The height or longitudinal growth of the male generally stops at about five feet eight inches, and in the female at about five feet, but this somewhat varies according to the country and the race. The longitudinal growth being finished, a determination of blood takes place in a contrary direction, which is necessarily accompanied by a lateral growth. The same remark holds good in vegetation; the tree first shoots upwards, tall and slender; when it has acquired its height, it spreads out its branches and thickens in the stem. Thus the trunk of the body and the limbs become larger and thicker, and energy, strength, and agility are now the inheritance of man. The skin, more firm, assumes a deeper tint; the hair and the beard becomes more crisp and of a darker shade; the nails become harder and more solid; the physiognomy is full of expression, the head is erect, the look steady, the step firm, free and easy. Man has now acquired his complete development, and possesses that constitution which he ought to retain until old age arrives, the first symptoms he will but too readily perceive. Scarcely has he finished his growth (I mean his second, or lateral growth), when his forehead begins to be bald, or the hair of the temples (so called because "tempus," or *time*, first puts his signet on them) becomes white; the skin begins to be marked with slight wrinkles; the forehead, the external angle of the eyes and the commissures of the lips receive their first indications of decline and approaching old age. At the same time, the body increases in obesity, and the muscles, especially of the inferior extremities, diminish in volume. At last, after a greater or shorter number of years, the general symptoms of decline, the breaking down of the constitution, inform the philosopher and the man of reflection, that it is time to renounce the world, and all its pomps and vanities. They are no longer evanescent wrinkles, which merely mark slight lines on the skin, but they are now deep furrows ploughed with the hand of time, not to be obliterated; the visage, fallen away, and of a dull earthy aspect, presents no trace of the bloom, and beauty, and freshness of youth; the hair has fallen, or else its snowy whiteness completes the similitude of the winter of life; the forehead is large, and the figure contracted; the eyes, sunk deep in the orbits, have lost their expression and vivacity; the cheek bones are prominent, the cheeks hollow and flabby, the chin and the nose projecting; the eyebrows, eyelashes, and beard are whitened and thin; a skin, harsh and dry, of a yellowish-brown, and sometimes more or less speckled with brownish spots, is loosely stretched over the dried up, withered, extenuated limbs; the muscles are soft and flabby; the body is bowed down, the height shortened, and the knees bent, and gradually he sinks into the tomb.

Such, gentlemen, is the external appearance of a man from his cradle to his grave. These mutations take place slowly and insensibly, so that, without the infirmities of the last age, man might believe himself, and often does

believe himself, ever young; an argument, I think, in favour of the immortality of the soul, for the mind never seems to itself to grow old. At all events it is an agreeable illusion, which prevents us from beholding the approach of that fatal period, which is to cut off all our fond and anxious wishes for the future, and to separate us from all the objects of our affections,—to separate us even from ourselves, and from every thing we hold dear in life.

CLINICAL LECTURES ON SURGERY,

BY BENJAMIN TRAVERS, ESQ.

SENIOR SURGEON OF ST. THOMAS'S HOSPITAL.

Delivered October 16th, 1834.

LECTURE I.

GENTLEMEN,—The case which I select for making observations on at this meeting is one of a few at present in the wards; it is not a case of very great interest, but still many practical remarks may be offered on it, which the experience of nearly twenty years' connexion with this hospital may render serviceable to you.

[The lecturer here stated his regret at having been obliged to withdraw himself from the school as a teacher, except in the wards, for so many years past, from indisposition which threatened to bring on serious disease.]

The patient, James Patterson, ætat. 35, had laboured nearly eight months under popliteal aneurism of spontaneous origin. He was admitted on the 11th of September, but his general health being slightly impaired by medical treatment prior to admission, the operation was delayed till it was re-established

On the 3rd of October it was performed in the usual manner; the pulsation in the tumour ceased. He had an anodyne on that night, and has not since experienced one unfavourable symptom up to this day. The ligature has not yet separated.

On this case but few remarks are necessary, owing to the good health of the man, his freedom from organic disease, and very cheerful disposition; every thing had gone on well; the limb is resuming its natural appearance, the tumour subsiding, and the wound healing favourably. A few observations may be made on various aneurisms occurring in the extremities, the liability and causes of their dangerous termination, and on the mode of operation least likely to produce such results.

Aneurisms in the extremities vary in character; they occur sometimes in an acute form; are sudden in their origin, rapid in formation and growth, and occasionally are attended with intolerable pain. Why this pain should attend some patients and not others is difficult to explain. Cases have been known where it was necessary to operate immediately on admission, on account of the great agony; while in the present instance, and as more generally occurs, they apply only on account of lameness and inconvenience.

It is probable that the sac and vessels leading to it being in an inflamed state, is the cause of such painful aneurisms.

The operation, when performed on thin persons, is more favourable than on fat ones; and satisfactory results may be expected in middle-aged subjects, where the vessels are good, and the contents of the cavity of the chest free from interruption, in such a case the operation may be successfully performed more than once. I have known a case in which six aneurisms occurred in various parts in the same person, and the operation was consecutively performed at proper intervals with success in each instance.

There is an aneurism sometimes observed without any pulsation, I have noticed several cases; they are difficult to recognise, and are instances more especially requiring the *tactus eruditus* of experience. They are a dangerous class of cases, generally occurring of large size, but equally to be feared when small; the reason of their danger is that the sac occasionally bursts, the fascia of the extremity being filled with extravasated blood and death soon produced. They may be operated on and cured as well as if they had an active pulsation; it is desirable to lose no time, and operate without delay.

Of the variety observed with respect to the result of the operation, Mr. Travers "has known five cases of gangrene and sphacelus of the leg and foot, following the operation for popliteal aneurism. This event, so difficult to account for, the Baron Larrey thought that the accidental inclusion of a branch nerve within the ligature, might cause it; this may be a coincidence, but it is by no means likely to produce such effect. It is more probably induced by a diseased state of the arteries, extreme age, derangement of the contents of the chest, as hypertrophy of the heart, aorta, &c., or languid state of the circulation.

"The cutting off the circulation abruptly has been assigned as a cause of the failure of the operation, but the cases of failure from this cause form a very small proportion; as the more probable reason is, too much detachment of the artery from its sheath. The great perfection of the operation consists in passing a ligature round the artery, with the least possible *denudation of it from the sheath.* The sheath is to be opened with a small slit made laterally with great care, the end of the needle armed with the ligature, is to be passed close round, and beyond that no separation of the sheath and coat of the artery is to be made.

"Another circumstance to be feared is the collateral circulation not being sufficient for the support of the limbs."

After some remarks on the various modes of operation which he considered objectionable, from detaching the vessel from its connexions,

and on various suggestions made to prevent the possibility of ligatures slipping off the vessel, and a few observations on the state of the school at St. Thomas's, Mr. Travers said, he "wished to renew the meetings at intervals of a week or ten days, to remark on interesting cases, and answer any questions on which you may wish to have my opinion. There are cases in Naples Ward, one of carcinomatous tumour, and one of severe hemicrania following an operation for staphyloma, and two cases of fracture in George's Ward, one compound of the humerus, the other simple fracture high up in the thigh. They are all worthy of great attention, and the subject of discourse in the next meeting will most likely be taken from them."

INCIPIENT PHTHISIS PULMONALIS.

[We fully agree with Mr. Montgomery that the following topic is of much interest, and are glad in having the opportunity of inserting it. The subject possesses an interest peculiarly its own, anything that may throw a ray of light on its treatment, or of hope of arresting it occasionally in its hitherto unchecked career, must be universally acceptable, not merely to the profession, but to the public at large, and therefore requires from us no further introductory comment or apology.]

Case I.—25th Sept., 1834. Wm. Farr, aged 22, is a labourer on an iron wharf in this city, where he is obliged to carry very heavy burthens on his shoulders, frequently of three hundred weight. Has hitherto been of remarkably healthy constitution, and of strength beyond what is common at his age. Since he has been in his present employment, a space of two years, has grown considerably in stature, which he frequently thought had debilitated his constitution from the severity of his work. All his family are low built, stout, and healthy, and none have died of decline that he ever heard of. About two years ago accidentally got a kick rather to the right side of the scrobiculus cordis, which for the moment suspended breathing, but has not since been inconvenient to him, with the exception of a stitch or sense of tightness in the part when he gets cold. About three weeks ago, when very warm at work, was suddenly exposed to cold, which chilled him, and brought on pains through his body, which confined him for three or four days. A week ago, when again perspiring profusely got a wetting, which produced a return of the pains, with debility and some cough, but no hæmoptysis, and has had a slight diarrhœa since fresh attack. Is now so weak as to be obliged to carry a staff to assist him to walk. Diarrhœa very much increased, to five or six stools a-day. Has no appetite, but frequent cough with expectoration, has never observed any tinge of blood; tongue pale, but little furred; pulse feeble, varying from 90 to 100 beats in the minute, alternately beating quick and slow, in each ten or twelve beats. Has nocturnal sweats regularly every night, and has lost flesh considerably for so short a time. The foregoing history was obtained after the first stethoscopic examination which I made, rather expecting to find a slight bronchitis or pleurisy, but was instantly surprised and alarmed by the very perceptible dulness on percussion of the right side anteriorly, which induced inquiry to assist in discovering the nature of the case. There was now very perceptible dulness on percussion in the right infra-clavicular and mammary regions, with great feebleness of respiratory murmur, accompanied with an occasional sibilant or fine mucous râle. Left side comparatively very sonorous, with well-marked puerile respiration, and some fine mucous or sibilant râles. The sounds of the heart appeared as perceptible on right side as on left. The constitutional symptoms then were emaciation, remarkable for the short period of the attack; prostration of strength; high sweats; colliquative diarrhœa; cough, with pale and very phthisical appearance. The locale on the right side considerable, but defined dulness; great feebleness of respiration over the dull portion, and a puerile respiration on left, with some mucous râles on both, and these without any previous inflammatory symptoms, the slightest crepitant râle, or any indication of an effusion, though both were carefully examined for. The râle very nearly resembled the valve sound, *bruit de soupape*, so frequent in the species of inflammation that gives rise to tubercular deposits in the lungs. He was ordered infus. quassiæ and tinct. hyoscyami, to be taken three times a-day, and ung. tart. ant. ℥j. to be used in four applications during the day. Next day the ointment

had brought out an eruption; but, what is worthy of observation, it was only one portion of the left side, where it had been but slightly rubbed on, that the eruption appeared; but there was not the slightest on the right side, where it had been most freely used, thus exhibiting the seat of internal irritation, and illustrating a well-known pathological fact, most remarkable in the high inflammatory states of hepatitis, pneumonia, arthritis, &c., and also the internal action of mercury in producing its specific action, in all which the high inflammatory state must be combated by depletion or other antiphlogistic means, before these remedies will exert their influence. An embrocation was therefore ordered with eight minims nitric acid to the ℥ iss., to be used four times a day. He complains of shooting pains in different parts of the chest, a very characteristic circumstance of this disease, and on the existence of which, almost alone, I knew a gentleman in Dublin, as remarbable for his eminence as a surgeon as his hostility to the stethoscope, declare a case to be one of incipient phthisis, but certainly very likely to mislead a practitioner unacquainted with this mode of investigation, to mistake, therefore, the disease itself.

29th. His complexion is evidently returning; the emaciation is less in his body and arms; the difference on percussion between the two sides of the chest is sensibly diminished; the respiratory murmur more distinct, and the puerile respiration on left side very considerably decreased. This last circumstance might be occasioned either by the system having now accommodated itself to the new action, and the consequent less demand for aëration, or from the *improved* condition of the diseased lung; the latter, certainly, being the more probable, as it was observed that till his perfect recovery, this decline of the puerile sound was in exact ratio with the improvement in the right side. For the last two nights he has been taking at bed-time a pill composed of acetat. plumbi, gr. ss., opii, gr. ¼ *. The acetas plumbi was now increased to gr. ¾ at bed-time. Under this treatment, with tonic infusions, the purging has been gradually diminishing, and assuming a more healthy appearance, and the appetite is returning. Pulse 108, but very compressible; tongue clean; coughs less, and night sweats greatly abated. An additional ʒ ss. of undiluted nitric acid w added to the embrocation, and the other medicines to be continued. The only thing observed on the posterior parts of the chest, was a *bruit de soupape* opposite the seat of dulness on the right side anteriorly.

Oct. 3rd. As he has found some slight pains in the colon, the acetas plumbi was now omitted, partly as purging and all his other symptoms were very much altered for the better. The right side sounds nearly as clear as the other; respiratory murmur still, however, more feeble, with the interrupted respiration, *resp. entrecoupe*, arising from irritation, causing spasm of the minute air passages, giving the sensation of two rapid, instead of one, inspiration, each time the breath is drawn in, so that it may now be considered in that condition, in which Dr. Williams so justly observes, that, in the incipient state, this murmur, by being sensibly feebler, will indicate a pathological condition of the lung, when there exists no alteration on percussion to mark it. The puerile respiration on the left side has entirely disappeared. He continues the nitric acid frictions over small portions of the chest at a time, alternating them, as each becomes much irritated.

From this time there was an evident daily improvement, both constitutionally and locally; and he continued to gain strength. About the 10th, being very anxious to do so, he was permitted to return to his work, with strict injunctions to avoid over-heating himself and getting cold, and to persevere in the use of the frictions daily, with an ointment of cerati lyttæ, ʒ ss., ant. tart., ʒ ss.

On the 15th there remained no indication of illness, but a faint entrecoupe respiration, marking the lingering remnant of irritation; there is a fine crop of eruptions from the ointment, which he perseveres in the use of. He is now fully as strong as before his attack. Mr. Hunter, of Mincing Lane, City, to whose kindness I owe having the care of this case throughout, verified all the foregoing observations as they arose. As further illustration of the benefit of the determined counter-irritant

* This is treatment so favourably spoken of by Dr. Bardsley, of Manchester, if I mistake not, in tubercular and some other kinds of diarrhœa.

treatment adopted in this case, I shall extract, verbatim, the notes of one that occurred last spring, in the Meath Hospital, Dublin, in the clinical department of Dr. Stokes, whose almost unrivalled abilities in, and zealous prosecution of, physical diagnosis, and medical literature generally, are universally known, and to whose instructions I owe what acquaintance I possess of this mode of exploration, besides debts of kindness, which all who are so fortunate as to be connected with him as pupils are certain to receive, as well as to draw a rich store of information from his luminous expositions of disease.

Case II.—T. Ryan, aged 23, admitted 28th March, of remarkably large growth, but of strumous appearance; has had frequent hæmoptysis at different times, but suffering no inconvenience, paid no attention to it, till last Sunday, when he got a cold, since which it has been much worse; has always been subject to slight colds. Expectoration coloured from admixture of blood.

Right side has a perceptible dulness from clavicle to sub-mammary region, inclusive, also from axilla to middle of same side. Respiration feeble, and accompanied with the sibilant and mucous râles; puerile respiration over a great portion of left side; perspires copiously at night. Twelve leeches were ordered to the axilla, a blister to the right subclavicular region, and a pectoral mixture.

Next day a liniment was ordered, with ℥ss. dil. nitric acid to ℥iij., to be used once a-day. Pectoral mixture, with mucilag. acaciæ, to be continued, and decoct. hordei with acid. sulph. dil.

30th. Found his breathing much easier; dulness still continues, though diminished. Continue liniment.

April 5th. Has continued the friction daily. The constitutional and local symptoms are greatly improved. In the mammary region there is now no difference on percussion, and very slight in the clavicular; this, it is to be observed, was in the space of eight days. The respiration still continues feeble on the right side, and somewhat puerile on the left.

The patient now left the hospital, afraid of losing a good situation, but promised to continue the employment of the frictions, since which I have not heard of him.

The similarity of this to Farr's case in all essential particulars is very striking, and, so far as it goes, is a valuable illustration of the benefit of the treatment pursued in both cases. In the latter, a strong constitutional strumous tendency, frequent hæmoptysical attacks, and great susceptibility to the influence of atmospheric alterations, gave little rational hope of successfully warring with a habit so impregnated, notwithstanding the great temporary relief given to all the symptoms. In Farr's case things were different. His was evidently one of the "accidental" kind, arising from the agency of powerfully-exciting causes in a constitution originally strong and healthy, but rendered, perhaps, more than ordinarily susceptible of these influences by the debilitating effects of a rapid growth during severe work. He was, in fact, of that class of patients of which Dr. Williams, in his philosophical little work before referred to, observes,—"The case that should afford us hope is that in which the pulmonary organic disease seems to be limited, the functions little embarrassed, the body not much reduced, and neither harassed by a complication of complaints, nor tainted by hereditary diathesis." * * * "And thus, if the study of physical signs shall often appal us by discovering the dreadful enemy that holds an object of our care, it has also established the consolatory fact, that its grasp is not universally relentless." Although, indeed, the light of modern pathology has rendered the occasional curability of consumption no longer a debatable question, this is generally to be attributed more to the operation of nature than the skill of the physician. Farr's case differs from all I have read or heard of, in this, that, instead of going through its regular stages of maturation and expulsion, the tubercular deposition seems to have been suddenly arrested in its progress, and to have given to a constitution, otherwise vigorous, the power of successfully grappling with its foe. His condition in life obliging him to return to his laborious occupation before his constitutional vigour could be fully re-established, a renewed attack, which will, however, I trust, be averted, would militate nothing against the inferences I would deduce from both of the foregoing cases, of the efficacy of energetic counter-irritation or revulsion in the incipient stage of this complaint. The

misfortune is, that seldom are they discovered in this state, unless some other cause may induce them to apply for aid. Nothing, however, can exhibit in a more convincing manner,—convincing to the most prejudiced sceptic, if any such now really exists, of the utility of auscultation and percussion, than such cases as these. The summary of the various symptoms, their masked and insidious nature, and the recency of the attack, would very probably have misled most practitioners, unacquainted with the employment of physical diagnosis, to consider it as a slight pleurisy or bronchitis; or, had the constitutional symptoms excited a suspicion of the true nature of the case, still it would have been unavailing, as to a knowledge of the immediate seat of the disease and the employment of remedies, till the period was passed when art could be any longer available, and most probably another victim offered to this relentless disease.

It may hence be justly inferred, that counter-irritation or revulsion would be advantageously employed in a much more energetic manner than is usually adopted in this disease. Nature, indeed, has long and hitherto in vain pressed this valuable fact on our attention, not only in the well-known circumstance of a determination of excitement towards the uterus in pregnancy arresting for a season the progress of the tubercles, but exemplified also in discharges of various kinds, as from piles, the uterus, or even from an open ulcer, the arresting of which gives the spur to the tubercular development. Before the employment of physical diagnosis, this was not available with any degree of certainty, yet it would lead us to place somewhat more reliance than is commonly given to them, in the reputed famous cures of a late celebrated empiric. But now, when the brilliant discovery of auscultation and percussion have given such comparative certainty to this branch of medicine, it is to be hoped that neither prejudice nor indolence will impede the universal adoption of a means by which even a chance may exist of staying the mighty havoc this direst scourge of these islands makes in our domestic society, and snatching from the tomb some, at least, of its annual victims.

Since the occurrence of Farr's case, I have had an opportunity of employing the counter-irritant treatment in the case of a child of five years of age with well-marked symptoms of incipient phthisis, a sequela to consecutive attacks of scarlet fever and hooping-cough, and with a result similar to that in Ryan's case. Unfortunately, this child is of a very strumous habit and appearance, and has a chain of enlarged cervical glands, so that an ultimate recovery, however desirable, is not rationally to be expected.

Reviews.

A Treatise on Diseases of the Chest, &c. By R. T. H. Laennec, M.D. *Translated from the latest French Editions.* By John Forbes, M.D., F.R.S. London: H. Renshaw.

Next to the author of a great work should rank the translator of one into his vernacular tongue as a benefactor to the literature of his country. In this position Dr. Forbes has stood for many years, in consequence of his translation of the immortal treatise of Laennec. Our readers are, doubtless, well acquainted with the original edition of the translation of this work, which appeared shortly after the work itself had been published in French. It is not less creditable to the profession in this country than to the work, to say that this is the fourth edition. We hope it may be taken as a proof that auscultation is being more and more generally employed, as a means of diagnosis, and, in consequence, that thoracic diseases are being detected with more accuracy, and treated with more success.

We do not take up our pen to commend his translation; its own merits have long rendered it independent of the smiles or frowns of reviewers, but we do so to inform our readers wherein this edition differs from its predecessors. A new edition of the "Traité de l'Auscultation Mediate," has lately been published in France, edited by Dr. Meriadec Laennec, the zealous and able successor of the discoverer of auscultation. It contains many very valuable additions in the way of notes, of which Dr. Forbes has fully availed himself, and he has also added, in their proper places, an account of the various improvements which have taken place in this country, through the industrious pursuits of auscultation by such men as Clark, Williams,

and Hope, in England, and Stokes and Townshend in Ireland. At the end of each section on a particular form of disease, Dr. Forbes has added a list of the various works published on the subject, so that, in the combination of these lists, the reader will find a most copious account of the literature of thoracic diseases in general.

It is but justice to our translator to state that he has added greatly to the value of Laennec's work, by the reference he has made in the notes to the various modes of treatment in particular affections. For instance, under the head of Chronic Mucous Catarrh, at p. 73, we find a note giving an estimate of the relative value of treating this disease with balsam of copaiba, steam inhalation, tar inhalation, or that of chlorine, by colchicum, and galvanism, as suggested and adopted by Dr. Wilson Philip; at pp. 94 and 95, there is one on the methods of treatment in hooping cough; on bleeding in pneumonia at pp. 222, 223, and we may add, that the notes to the whole of this section are very deserving of the attention of the practitioner. Under the head of spasmodic asthma, there is a very copious account of the more important therapeutic agents, which, for a disease which often demands the employment of such a variety of remedies, the practical man will peruse with satisfaction.

The application of mediate auscultation to the investigation of the heart's action, was confessedly left by Laennec in a very imperfect state. We ourselves greatly question whether much advancement has been made in it since his time. Yet physicians have not been idle on this subject, and our journals have teemed with notices and essays respecting the labours of Turner, Corregan, Hope, Pigeaux, Magendie, &c., on this subject. Dr. Forbes has introduced, in a lengthened note, an abstract of all the various opinions and observations of the above-named writers; it is from the pen of Dr. William's, and extracted from the latest edition of that gentleman's very valuable work, "the Rational Exposition of the Physical Signs of the Diseases of the Lungs." The addition of this, as well as of the notes to the other sections, on the bellows and other sounds, brings the work *up to the times*.

To give any thing like a review of this work, would require a space which our hebdomadal could hardly afford in half-a-dozen numbers; it was not our intention to give more than a brief notice of it. This, we trust, we have done to an extent sufficient to show that this new edition does contain new matter of much importance. The translator has done well to alter the title of the book from Laennec's modest one, *Traité de l' Auscultation*, &c., to the more comprehensive one of *Treatise on the Diseases of the Lungs*, &c., which name it always eminently deserved, but never more so than when translated by Dr. Forbes, and elucidated by his valuable annotations.

We conclude by an announcement which gives us great pleasure, because it is an earnest of the wide diffusion of the work. We give it in the words of the translator, from the last paragraph of his preface.

"I will only further add, in conclusion, and as an acknowledgment due to the publisher, that, notwithstanding that great quantity of additional matter, the expense of engraving new plates, and the superior typographical elegance of the work, it is offered to the profession at a price very considerably below that of the preceding editions."

The Surgeon's Practical Guide in Dressing and the Methodic Application of Bandages, illustrated by numerous Engravings. By Thos. Cutler, M.D., late Staff-Surg. in the Belgian Army. 12mo. pp. 195. Taylor.

We have been much gratified in the perusal of this little work; the rules for dressing wounds, adjusting fractured limbs, and applying bandages, are clearly described, and illustrated in a very perspicuous and comprehensive manner by the numerous wood-cuts. There are few students in surgery to whom it will not afford much interest and useful instruction. To those who have the opportunity of watching and assisting in dressing at the hospitals under proper superintendence, its utility may not be so great, but the junior student and the apprentice ought to possess it; even the junior profession may derive many useful lessons from its contents. The diction is plain and simple, and the descriptions very intelligible. We know of no work in the English language of its kind. It is of great importance to the young surgeon that he should perform the minor operations of surgery with neatness and precision.

His success in practice may ultimately depend upon this circumstance. Clumsiness and awkwardness in applying the bandage after phlebotomy, however simple the operation may appear, have often retarded the progress of a young man just embarking in practice. The lessons of John Bell, Mr. Alcock, &c., on this subject few forget, and have not appreciated them by experience. The following quotation from the preface will convey a clear idea of the contents of the work.

"This work is divided into two parts, the first treating of dressings and bandages in general, and the principles of their application; the second, of bandages in particular, classed according to the regions of the body, under the respective heads of bandages of the head and neck, of the trunk, and of the upper and lower extremities. Each bandage is, moreover, subdivided into its composition, its application, and its use, particular observations being added as occasion may have required. Throughout the whole work, which is illustrated in various parts by wood-cuts, carefully executed by Messrs. Bagg and Son, the author has endeavoured to render the detail as brief as possible, without the sacrifice of either clearness or exactitude. He has drawn the materials necessary to its execution from practice, from personal observation in the British and Continental hospitals, and from the works of the most distinguished writers upon surgery generally, or upon this department, in particular, of the science, introducing nothing but what has appeared to him decidedly useful, he has still allowed for cases of great consequence an ample choice of means. To conclude, he has studied to render the work equally valuable to the army and navy surgeon, the general practitioner, and student. His whole and sole aim has been utility, and should the event prove that he has not been mistaken in his views, the conviction of having done some service in the field of British surgery, will adequately repay him for his pains."

This production reflects great credit on the author, and its execution deserves our warmest commendations. Every student should possess it.

EXTRACTS OF THE MEDICAL TOPOGRAPHY OF FRANCE AND ITALY,

TAKEN FROM DR. WEATHERHEAD'S "PEDESTRIAN TOUR."

MONTPELLIER.—The road leading to this haven, which phthisical hope has so often panted to reach, becomes less and less interesting the nearer you approach it. Olive plantations extend on both sides; but the olive is a dismal looking tree, and if it really personifies *Peace*, it must be of the *requiescat* description, for every branch looks as if it bore a hatchment.

Montpellier, as a town, I knew was not likely to interest me; but I was anxious to visit it, that I might judge of its climate. How this place ever obtained its reputation as a fit residence for the consumptive invalid it is difficult to account, unless, indeed, from being the seat of a medical school, and that its professors understood the benefit of such a character. The situation of Montpellier is open and unprotected, standing on a hill exposed to the *bise*, which tickles the weasand like a notched razor—enough of itself, without other co-operation, to produce the *chin*-cough. Did those deluded victims, who are sent to such a distance, frequently to die on the road, know what they sacrificed when they left the comforts of home—the healing solace and sympathising attentions of friends, for the fallacious assurances of a more genial climate, they would never quit their native shores, for the cold recompense of lying in a grave beside her * whose fate gave occasion to the "Night Thoughts."

PISA.—Viewing the flat country all around Pisa, extending from the heights behind it and spreading to the sea, it appears manifest that the greater part must have been gained from the retreat of the Mediterranean. Even now, deep ditches, towards Leghorn, conduct the water to the sea, and the prevailing diseases of the country show its damp and marshy nature. Notwithstanding the authority of a late intelligent traveller, Mr. Mathews, I think his opinion of the climate of Pisa, as a fit residence for the consumptive, must be taken with considerable reservation.

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* Young's daughter died and was buried at Montpellier.

There are forms, certainly, of incipient phthisis, which yield under the influence of a moist and bland atmosphere. The coast of Devon founds its claim to preference and selection in England on such qualities. But there are other forms of this fatal malady, which, instead of being benefited by a climate of a humid character, become much aggravated by its increasing the languor and debility, augmenting the expectoration, at the same time that the hectic perspirations become more colliquative and profuse. To this latter species of the disease, the moist and relaxing air of Pisa acts like an exhausting pump, and the disease gallops to its goal. According to a census given by Dr. Palloni, a physician at Leghorn, one in five of the native inhabitants, out of a population of 75,000, die of consumption, a proportion larger even than in England.

Rome.—The most heedless observer must frequently have witnessed how speedily the roads in the neighbourhood of Rome dry after even great torrents of rain. He mistakes much if he thinks this proceeds from evaporation; for the heat of the sun, even in the hottest summer months, could dissipate but little in so short a space of time: it is absorbed by the deliquescent nature of the volcanic soil; and he may convince himself of the fact, by remarking how permanently moist this is all the year round a few inches under the surface. This property of the soil of Rome is, in my opinion, the chief source of the *malaria*, so fatal in its effects here at certain seasons of the year. Heat and moisture, we all know, vivify and disengage the fomites of disease; no wonder, then, that these, acting on the debris of animal and vegetable matter in a state of decomposition, buried for ages, and daily gaining fresh accumulations from the negligence of the local municipal police, should generate pestilential effluvia, and by infecting the atmosphere of Rome during summer, produce fevers of so fatal a type.

This pernicious condition of the soil is not confined to Rome, but extends as far as the deliquescent earth (its peculiar matrix) itself does, and hence the unhealthiness of the whole of the Campagna.

With such facts before our eyes, there is no necessity, nay, it is absurd, in my opinion, to look as far as the Pontine marshes, a distance of forty miles, with the range of the Alban hills intervening as a barrier, for malarias, which, be it remembered, must have unvarying winds, at a certain season of the year, to blow them thither undiluted, otherwise they will not account for the regular periodic unhealthiness of Rome. It is computed that about 10,000 pounds' weight of bark are yearly consumed in Rome and its vicinity; and phthisis is far from being an uncommon disease among the inhabitants.

Naples.—Speaking of the Hospital of the Invalids on the heights of Saint Elmo, and of the number of blind that are among them, Dr. Weatherhead observes,—Here I first saw that it was no longer a figure of speech for "the blind to lead the blind, but a melancholy fact, a circumstance which he attributes to the acrid nature of the exhalations proceeding from the volcanic constituents of the soil. From Suessa to Naples this is uninterruptedly composed of volcanic debris, whence various irritating salts and gaseous fumes are constantly being given out, and float about dissolved in a moist and highly heated atmosphere. Such, coming in contact with the eyes, first irritates, and then inflames them, and hence arise the prevalence of ophthalmia, and its common consequence,—blindness,—in places where these exhalations exist.

The soil universally is impregnated with sal ammoniac, and sulphurous and other acid fumes are continually arising from the thousand "*sævi spiracula Ditis*" all around Naples. These naturally prove highly irritating to the lungs, aggravating all pulmonic diseases; and, I apprehend, the Italian saying,—"See Naples and *die*,"—has often been too literally verified by many an English victim, led to a premature death by the pernicious and self-interested counsel of itinerant medical practitioners, the modern Περιοδευται. According to Dr. Ruggiero, deaths from consumption form a fifth part of the bills of mortality in Naples. This impurity of the atmosphere is even sensible to the nostrils, for the air never has that sweet refreshing aroma which makes an English spring so grateful and fragrant.

THE
London Medical and Surgical Journal.
Saturday, October 25, 1834.

ON THE REPORT OF INQUIRY INTO DRUNKENNESS.

We stated in our last number, that the "Report on Drunkenness" should be again referred to.

Dr. Gordon examined. He stated "that the proportion of diseases which was distinctly referable to ardent spirits, was 65 per cent. upon some thousands," that ardent spirits have a direct and specific influence upon the liver. The Doctor believes that in every spirit drinker the liver is more or less disorganised; that wine might be taken, even in large quantities, yet its effect upon the system would not be near equal that of very small quantities of spirit drunk daily; that beer is not the intoxicating liquor of the lower classes in London, in many counties it is drunk to a large extent, but its effects are not at all allied to those which ensue from spirits. We seldom meet with a case of delirium tremens from beer, in the form either of ale or porter.

Every medical man is aware of the potent agency of spirituous liquors on the human constitution. Our object in presenting these facts and opinions to the profession, is not to prove to them, an admitted fact, that stimulants, such as undiluted spirit, derange the mucous membrane of the alimentary tube, and consecutively the whole animal economy, but it is to enforce their attention to one of the chief, nay, we might say, to the grand source of all human infirmities. There is an old adage, that "a knowledge of a disease is half its cure," and we might with equal justice assert, that a knowledge of the cause of a disease is an equal desideratum. We speak of the state of the atmosphere as inducing disorder of the frame, but from the frequency of its operation we often neglect its influence. Though we cannot control the elements, alter the electrical conditions of the atmosphere, or regulate by chemical agencies, or by human laws or human institutions, its specific gravity, we can still modify its condition in the chamber of the sick. Intoxication has become a watch-word in this country; in the streets and at the convivial board, the influence of the juice of the grape or more noxious elements is loudly, daily, hourly, proclaimed.

We would recommend every practitioner to peruse the report under notice. They will see facts accumulated on facts, evidence adduced, the most irrefragable and no less perhaps astounding, of the baneful effects of spirituous liquors on the human frame. It makes us shudder in the perusal of this evidence, and the almost universality of the power that the practice exercises. Most able witnesses have, by personal observation and by rigid inquiry, arrived at the same conclusions, that the varied physical derangement of the body, the multiplied distresses of our nature, are in the majority of cases attributable to dram drinking, to the insidiousness of its operation on the vital and mental functions. Shakspeare said, "any man living may be drunk at some time;" but it is not the occasional indulgence in "potations pottle deep," that appears to "undermine," that so certainly annihilates the body. Dr. Gordon states, that in every spirit drinker the liver is more or less disorganised. Our own experience verifies the conclusion. "Drams" are daily producing structural disease of the liver, or derangement of its function, and blue-pill or black draughts are employed

as restoratives. Thus a poison is taken at night, and an antidote in the morning.

The misanthropist may leave the system alone, it will correct itself. We affirm never. Without some legislative enactment, which shall prohibit the sale of spirits, either in toto or in a great measure, the system will progress to such an extent, that Englishmen will ere long be a species of dwarf, or a nation of human deformities. These are not wild inferences or hyperbolical assertions, but the results of observation, inquiry, and philosophical induction. We would not deprive men of the comforts of life, but allow the use of every luxury. We wish to expose the fatal error of the public, in regarding articles inimical to health and happiness as luxuries, and to prohibit which, in their estimation, would be depriving them of their boasted liberty. The philanthropists in our profession we urge to cry aloud against the system, and denounce it in public, and decry it in private. We wish the Temperance Societies were under the direction of the legislature, and extensively instituted; they have already done good in many parts of England, but in America their effect has been incalculable.

EMPLOYMENT OF MIDWIVES BY DISPENSARIES—SHEFFIELD PUBLIC DISPENSARY.

The medical profession in Sheffield are justly indignant, that the governors of the above Institution should select midwives to attend the poor, in preference to themselves, but more especially, "that all the medical officers of the Dispensary approve of the present practice of this Institution, as to employing midwives, as announced in an official advertisement from the Dispensary.

It is true that in the majority of cases labour is natural, and, if not interfered with by art, terminates successfully, but it is equally true that, in a large number of cases, manual assistance, dexterously afforded, and considerable anatomical and medical knowledge as well, are demanded; without such requisites no individual, male or female, can be a competent accoucheur. This is a simple proposition, and of which no one would, we believe, impugn the verity. A female, educated for a midwife, who has undergone the proper discipline, is assuredly as prepared to practise the art as a medical man; but where do we meet with such persons? —Not in provincial towns, certainly;—not, we should imagine, in Sheffield, where there is no female obstetric school or teacher. We know what the whole class of midwives is, every medical man is aware of their pretensions,—ignorant of all the necessary branches of medicine which should qualify them for the practice, their only qualifications being a remarkable loquacity, and, we regret to say, many of them having a strong penchant for the "cratur." Their success is generally dependent upon chance, not upon knowledge; experience, the blind guide, is their director; and drams too often the chief ingredients in their prescriptions. The profession in Sheffield have acted, as they usually do, with judgment in objecting to the employment of midwives in the Well-Street Dispensary of that town. They urge their objection on public grounds, and from a philanthropic motive—the good of society, from the conviction of the incompetency of the midwives, a motive highly laudable, and reasons sufficiently cogent*. Dispensaries

* What we are astounded at is, that the medical officers should give not only their consent but approval of midwives being con-

constitute one of the evils in society: they are but arenas for squabbles, and for the display of party-feeling. As at present conducted, we believe them to be not only useless, but injurious, and heartily wish they were annihilated, and never to be restored, unless under far different auspices.

STATISTICS OF THE CHOLERA IN PARIS.

In no part of France was the cholera so disastrous in its effects as in Paris. The Prefects of the Seine sometime since appointed a Committee of Health, consisting of MM. Benoiston de Chateauneuf, Chevallier, Leon Devaux, Louis Millot, Parent Duchatelet, Petit de Maurienne, Trebuchet, Villermé, and Villot, to inquire into the whole subject; and they have just made their report upon "The Progress and Effects of the Cholera Morbus in Paris, and the Rural Communes of the Department of the Seine." This Report contains not only a complete analysis of all facts bearing on the disease, the subject of consideration, during the year 1832, but adds some important information relative to the general salubrity of the French capital.

It appears that on the 26th of March, 1832, five persons were attacked by the cholera, and died in a few hours; on the 27th there were six; next day as many as 22; and on the 31st the number of cases amounted to 300. The disease had by this time invaded 35 out of the 48 quarters into which Paris is divided. Two days after it had extended to them all. On the 2nd of April the number of deaths was as many as 100 per diem. On the 3rd twice that number died, and on the 5th not less than 300. On the 9th 1200 persons were attacked, of which number 814 perished. On the 14th the number stood from 12 to 13,000 cases and 7000 deaths. At this point it was impossible, from the extent of the malady, to ascertain the number of cases, or even to bury the dead; and it was dreaded every moment that the ravages of typhus would be superadded to those of the more afflicting malady.

The number of deaths amounted, in Paris alone, during this year, to 44,119. If from this number be taken those caused by cholera, 18,402, there will remain 25,717; the average annual number for the last ten years preceding being 25,300. The anxiety to escape from what for some time might be called a "city of desolation," may be judged from the fact, that the number of post-horses taken on the 5th, 6th, and 7th days of April was 618; and the passports increased 500 daily beyond the average number. In the hôtels and furnished houses, the departures during April was between 900 and 1000, and the arrivals at the same but 500.

On the 16th of April the deaths fell from 756 to 651; and on the 30th they were only 114; and from the 17th of May to the same day in June, the number of deaths daily averaged from 15 to 20. By the end of June, and during the first days of July, the mortality again rose to between 30 and 45 daily. Suddenly this limit was exceeded; on the 9th the number of deaths was 71, on the 13th 88, the next day 107; 128 on the 15th, the ensuing day 170, and 225 on the 18th. The day after the number fell to 130, and on the 28th of July the number had fallen to between 25 and 30 daily. After the 8th of September the number was between 10 and 20; between 1 and 10 from the 18th of September to the 1st of October, and then from 0 to 6; at which point the disease was considered terminated.

The whole duration of the cholera in Paris was 189 days, from the 26th of March to the 30th of September, or from one equinox to the other. The period of its increase lasted 15 days, of its decrease 62.

During the first period more than two out of five of those who were attacked perished. From the 20th of April the proportion became about one-half, and at the commencement of May it was only one-third.

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tinued. In the comments in the *Sheffield Mercury*, the following remarks appear:— "Can it be true that one of these officers, *a short time ago*, stated to a brother practitioner, that he had just been called to a patient of the Dispensary, *who was lost*, in consequence of not having *proper assistance* at the *proper time?*—It is true!" We trust not; if it be, the man is a disgrace to his profession, and will, undoubtedly, be shunned by his brethren.

The second attack differed from the first in many of its features: the latter had attained its maximum after a fortnight, the other did not reach it until a month had elapsed. The greatest number of deaths in one day during the second was only 225 a-day, whereas in the first attack it had been so high as 814.

The circles most severely attacked by the first were likewise so by the second.

The disease killed in Paris in the first period of its invasion in March 90 persons; in April 12,733; in May 812; to the 15th of June 266; making a total of 13,901. In the second period to the end of June, 602; during July 2573; August, 969; September, 357; total 4501; making a grand total of 18,402. The Commission has taken particular pains to ascertain this last number, as industrious exaggerations had made it considerably more.

Of these 18,402, the number of males was 9170, and of females 9232, a proportion almost exactly in keeping with that of the two sexes, the last census of 1831 having given, in Paris, an excess of 10,640 females over the male inhabitants. At the commencement of the epidemic more men fell victims than women. From the middle of April to the 10th of May, the number of females slightly exceeded that of the males, and then the latter fell in greater number up to the departure of the disease.

With respect to age, it appears that the cholera had increased by one-sixth the chances of death in childhood; five in ten in the next stage of life; and by two-thirds those of adolescence; it more than doubled those of advanced years, and nearly so with those of the aged. The average duration of the malady, taken in 4907 cases, was 61 hours 8 minutes. In May, June, August, and September, the duration was 84 hours.

It appears from the observations made on the state and varieties of the constitution of the atmosphere in 1832, that in the climate of Paris, no matter what was the degree of temperature and the direction of the wind, the cholera does not seem to have been affected thereby in one way or the other. The same observation was made in Poland and Prussia.

The circles of Paris were very unequally affected by the visitation; in the six first but 5196 persons out of a population of 383,390, or about 13·55 in a thousand; in the six last, 11,376 out of 375,745 inhabitants, or 30·28 per thousand. A similar difference has been remarked in the ordinary mortality. In the twenty quarters exposed to the north-west, north, and north-east winds, the average number of deaths out of 1000 was 12·07; for the nine quarters exposed to the north-west and north-east, it was 28·46; the east and west present a proportion very nearly equal, 28·54 and 28·50. It appears, then, that exposure to the north-west, north-east, west, and east, caused of the deaths a proportion more than double those to the south-west, south, and south-east. Elevated quarters were, as compared with those in low situations, attacked in a less degree, by only five in a thousand; and in some low situations the proportion was about the same in their favour. Enormous differences were manifested in places on the same level, proving that elevation had nothing to do with its effects.

Fifty narrowest, and supposed to be most insalubrious, streets, have been compared with fifty others in the possession of the opposite advantages; in the first the mortality was 33·87 out of a thousand, in the second 19·25. In Paris, the cholera did not attack particularly those living near the river, or follow its course in its progress of development; its rigour was not in the same extent as the quantity of water in each circle. The mortality on the banks of the Seine, the Bierre, and the canal St. Martin, was 26 out 1000 inhabitants; 19 localities out of 41 have given less than this proportion. The general average was 23; the course of the water then did not augment the number of deaths by more than 3 in 1000.

The mortality from cholera does not seem to have been at all in proportion to the density of population, but rather in the combined proportion of the number of inhabitants of each circle, quarter, street, and house, with the habits, profession, and poverty of the inhabitants. This fact is one which the commission took the most satisfactory means of ascertaining.

With respect to professions, the 18,402 deaths were thus divided:—2073 persons belonging to the literary professions, 1816 to the commercial, 6523 to the mechanical, 4180 to those in the receipt of salaries as clerks, &c., 1,034 of the military, 983 children belonging to

parents whose professions were not known, and 1793 of both sexes whose avocations could not be ascertained. The different professions composing these classes were unequally attacked; and there were many in which the cholera did not increase in proportion to the numbers engaged in them, as compared with the ordinary mortality.

It results from an examination of the various avocations, that the cholera raged less among individuals who were exempt from the changes of the air, or whose social position gave them something of an easy life, or who found in the exercise of their professions a comfortable means of livelihood. Among the classes spared were those living on their property, whether in land or the funds, and those in public employments; merchants in various commodities, such as cloth, furniture, stuffs, wine, mercery, groceries, fruits; librarians, jewellers, goldsmiths, florists, and other similar keepers of warehouses and shops; and, finally, domestic servants who shared in the comforts of their masters. On the other hand, its ravages were greatest amongst those in employments of a laborious kind, such as small retailers, workmen, and labourers.

The emotions of the mind also exercised considerable influence in reference to the disease; and intemperance was remarked to have more perhaps than anything else. It appears that the maximum of the admissions to the hospitals took place on Mondays, and the minimum on Sundays; and that between both there was a difference of about one-eighth, which must be attributed to the excesses of the working classes on the sabbath.

Similar results have followed in a very remarkable degree from the inquiries made by the commission throughout the departments of France; and one singular fact has been firmly established, namely, that in the greater part of the villages, when it made its appearance in those places previously considered unhealthy, its ravages were not greater than elsewhere; nay, in some places, the reverse was found to be the case. In this respect, as in most others, the cholera made sport of all precautions for the future, as well as of all the experience of the past.

CASE OF HYPERTROPHY OF THE BRAIN, WITH SPONTANEONS OBSTRUCTION OF THE HUMERAL ARTERY, AND OTHER MORBID CHANGES.

BY DR. CHRISTISON.

A woman Johnston, of dissipated habits, and 37 years of age, was admitted into the infirmary of this place, affected, as was alleged, with palsy. Her friends could not give any account of her illness, further than that she had been suddenly taken ill fourteen days previously with weakness in the limbs, and that in eight days she began to complain of severe headach, and to lose her memory.

When first I saw her, the sensibility was generally impaired; yet she expressed pain, in whatever part of the body the skin was pinched. She could move both legs and the left arm with tolerable freedom; but the right arm was quite flaccid when moved by another person; and although she could move it when desired, she did so feebly, and could not direct the hand to a given object, which she could do well enough with the left. There appeared also to be an imperfect paralysis of the muscles of the face. When she spoke, the left side only of the mouth moved, and when she was pinched on the trunk or extremities the left corner alone of the mouth was retracted. Yet when the *right* cheek was pinched, she then retracted both sides. The eyelids on both sides were unaffected. The tongue was thrust out straight, when she was told to show it. The pulse was above 100, moderately full, and rather hard. The breathing was slow and soft.

There was obviously considerable stupor. She had a tendency to doze, did not always understand even simple questions, and her words were broken and incorrectly connected, though it was evident she sometimes understood sufficiently what was said to her, and what she ought to say. The pupils were dilated, but contractile.

In the right arm the pulsation of the artery ceased abruptly about two inches below the level of the outer edge of the *pectoralis major*, and could not be felt any where lower down. This arm was also very cold, while the rest of the body was at least of natural warmth.

I immediately directed that she should be

bled; but she fainted when scarcely four ounces of blood were withdrawn. She was bled from the *left* arm. A brisk cathartic was then administered, and also a purgative injection.

On the second morning the right arm was completely paralysed; but the left arm and both legs continued sensible, and likewise retained freedom of motion. The general sensibility and her articulation were unaltered. The bowels had not been moved. The pupils were less dilated. The pulse in both wrists and ankles was no longer perceptible; and at the temple it was 80, and very feeble. She still thrust out her tongue when desired to show it. On examining the heart with the stethoscope, it was found that neither impulse nor sound was produced at the ordinary period of the heart's pulsation; but instead of them there was a very distinct and prolonged *bruit de soufflet*.

She was much inclined to doze in the morning; afterwards the somnolency gradually increased till complete coma was established, and in the evening she died.

The body was examined in forty-two hours. In the chest, the lungs were found gorged here and there with blood towards their posterior surface. The heart and arterial system appeared unusually small for a woman above the middle stature, as she was. The valves of the heart were healthy, with the exception of the mitral, one division of which was nearly separated from the parietes of the heart by a fissure; and both edges of this fissure were covered by crumbly, cauliflower-like excrescences. The inner coat of the aorta was here and there opaque and inelastic.

In the region of the right arm, corresponding with the point where the pulsation of the humeral artery ceased, a considerable swelling of the artery was perceived; and about two inches below the upper edge of the swelling, the artery very abruptly diminished to less than half its natural breadth. On laying open the vessel in the situation of the swelling, it was found that immediately below the going off of the *profunda humeri*, the whole circumference of the inner coat was detached along half an inch of the course of the vessel, and hung loose in the cavity in the form of a cone; that this cone, of course pointing downwards, was filled with white, firm fibrin, to the upper part of which was attached a bloody clot an inch long, and adhering to the undisturbed part of the inner coat. Below the cone the tube of the vessel contained another looser and unattached clot; and between the cone and the stripped fibrous coat purulent-like matter was deposited.

In the head we found the whole surface of the brain uncommonly dry, both on its upper region, and likewise at the base. There was no fluid whatever between the *dura mater* and arachnoid, or in the base of the skull; neither was there any effusion in the arachnoid itself. The convolutions of the brain were flattened in a considerable manner, and the vessels in their grooves, though they contained a good deal of blood, were manifestly compressed. The whole substance of the brain was rather firmer than usual, except at the posterior part of the posterior lobes on each side, where the cortical substance was softer than elsewhere. The cortical structure had everywhere its natural colour. Throughout the whole substance of the brain very few bloody spots were presented when it was sliced. The right ventricle contained less than a teaspoonful of fluid, and the left a few drops only. In the posterior angle of the left *corpus striatum* there was a spot as big as a sixpence, where the tissue of the brain was reddish and softened to the consistence of a thick pulp. No other disease could be found in any part of the brain, except two minute tubercular bodies of the size of half a lupin-seed, in the external cortical matter of the left middle lobe. The cerebellum was healthy in colour and firmness, and its convolutions not flattened.

I have presented the preceding case to the Society, as being, so far as I am aware, the first that has hitherto been noticed in this country of the remarkable disease described about the same time by M. Dance and M. Laennec (*neveu*), under the name of *hypertrophy of the brain*. In the original papers of these gentlemen, of which a copious abstract has been given in the Edinburgh Med. Journ., vol. xxxii., p. 225, several instances are related where the signs of what they consider hypertrophy were present without any other diseased appearance whatever,—namely, want of the ordinary cerebral fluid, flattening of the convolutions, unusual firmness of the

substance of the brain, and diminished vascularity of the brain and its membranes. In the present case these signs existed along with partial *ramollissement* of one *corpus striatum*, which concurrence of pathological appearances was also remarked in some of the French cases. When the description I have endeavoured to give of the state of the brain and its membranes in my patient is carefully attended to, I think it will appear scarcely possible to ascribe so much external flattening of the convolutions, dryness of the membranes, and firmness of the cerebral tissue to any other cause than hypertrophy. It cannot be reasonably referred to the *ramollissement* in the *corpus striatum* producing distension of the surrounding cerebral matter; because flattening of the convolutions in connexion with this disease is observed only when the *ramollissement* is very extensive, and even then not always.—*Edin. Med. and Surg. Journ., Oct.* 1834.

EPILEPSY.—GREAT VENOUS TURGESCENCE IN THE SUPERIOR PARTS OF THE BRAIN AND CEREBELLUM.

BY JOSIAH ALLSOP, ESQ., BIRMINGHAM.

W. Ward, æt. 13, laboured under epileptic fits two years. The fits recurred at irregular intervals, generally about a week's duration. The convulsion, with loss of consciousness, lasted but for a few minutes, followed by sleep. If he had been attacked in the night-time, he always felt shivering on washing in the morning. They usually left slight giddiness and headach. Stooping much would bring them on. They first came on in the night, after being fatigued making hay, exposed to the sun without his hat, recurred three successive nights, and then left him for four months. The cause of their second recurrence was unknown. His perception is dull. There is a heaviness and stupidity in his appearance; but his appetite is good, and bowels quite regular. He is full-grown, stout, and has the appearance of enjoying excellent health. On their first occurrence, bleeding, seton, and antiphlogistic remedies were used without benefit; indeed, depleting treatment seemed to increase their frequency. Afterwards, the nitrate of silver and ammoniuret of copper were persevered in some time without the least benefit, after an interval of less frequent fits.

April 11th. He had three or four attacks, one coming on before he had recovered from the sleep of the preceding, then a few days' usual health.

15th. He had gone to bed in his usual health, but had several severe fits during the night. He had another immediately after a shower-bath in the morning of the 16th, and several in the forenoon; in the intervals he seemed more stupid than usual, but complained only of slight headach; costive.

17th. Only one slight fit; stupid.

18th. Frequent recurrence of slight fits all day. In the night he was insensible, three hours lying supine. The muscles of the face and jaws convulsed.

19th. He had a very severe fit, leaving slight coma and twitching of the face in the place of the usual sleep. The medical attendant was now called for the first time, and eighteen or twenty ounces of blood taken immediately; after which the pulse rose in frequency, with palpitation and a severe convulsion fit, followed by coma and twitching of the face until midnight, when he became restless, shouting out "death" loudly for some time. He then relapsed into insensibility, stertorous breathing, twitching of the face, and died on the evening of the 20th.

Examination of the body on the fourth day after death.—The brain was soft, but not more so than usual in individuals of that age. The veins of the superior part of the brain, and of the cerebellum, were minutely injected, and extremely turgid with fluid blood. The vessels on the inferior surface were empty. Dark points, larger than I ever found before, studded the white matter of the superior part of the brain; diminishing in the centre, till scarce any or none were found in the white matter of the base. The sections of the cerebellum also presented them, but rather thicker on one side than the other. About three teaspoonsful of serum escaped from the whole—a very minute quantity of which was found beneath the arachnoid. The grey matter was full-coloured, much deeper in the cerebellum than in the brain, but contained no bloody points. The veins of the spine were also turgid; but its sections quite natural, and free from bloody points. No other diseased appearances could be found in any part of the cranium, or of its contents. The stomach was perfectly natural.—*Op. cit.*

Foreign Medicine.

HÔTEL DIEU.

Clinical Lecture on Rheumatism.

BY M. CHOMEL.

In what does the distinction between gout and rheumatism consist? With us the arthritis of the ancients goes by the name of articular rheumatism; and though we distinguish between it and the muscular affection on account of the differences of the symptoms, we so often find them co-existent, as to induce us generally to consider them as affections similar in their cause, though arising in different organs.

The attack of the lesser joints in a primary and exclusive manner, accompanied by an affection of the digestive system, is by some denominated gout; but in what does the affection differ more than in the position of the joint; in the deeply seated one of the hip, the redness and swelling are rendered imperceptible by the thick muscular coat, while in the lesser articulations the symptoms are rendered evident by their superficial nature.

Now these distinctions must be confounded when the greater and lesser articulations are simultaneously affected; the effect produced on the digestive organs is even more severe when the greater articulations are attacked, and the rheumatism has been proved to be as hereditary in its nature as gout.

By the ancients, regular gout was characterised as an articular affection, indicated by redness, tumefaction, and heat, also by paroxysms, and febrile symptoms.

The irregular had further symptoms; it was divided into, first, atonic gout, characterised by flatulence and indigestion; this we may consider as muscular rheumatism of the stomach and intestines; secondly, retrocedent gout, in which metastasis from one structure to another takes place, which we explain by the change in its nature from muscular to articular; thirdly, misplaced gout, attacking the stomach, differing from the retrocedent, affecting the same organ, only in there being no precedent affection.

The affection of the rich rather than the poor has been brought forward as another distinction, but its cause merely originates in this that those engaged in active labour only, desist on the attack of the great joints. Cretaceous deposits take place in the small joints only on account of their different disposition, for when both the great and small articulations are affected, still the concretions are formed merely in the small articulations; to explain which on the old principle, we must suppose the existence of rheumatism in the one, and gout in the other. The co-existence of gravel with gout is no characteristic, because the causes of gravel are also favourable to the development of rheumatic articular affections, and what can be more favourable to the accession of the gravel complaint, than the state of inactivity to which the gouty patient is condemned, by persisting in his way of living?

The treatment of gout differs not from that of rheumatism in the least degree, if it be regular; if it be irregular, and an important organ be affected, we apply leeches to the part, and sinapisms to the joints previously the seat of disease. Atonic gout has been regarded as requiring tonics, and misplaced gout powerful diaphoretics. To point out these differences, is to indicate their frivolity. The distinction between gout and rheumatism is ideal; they are but varieties of one and the same disease.

ACADEMIE DE MEDECINE.

Sitting Sept. 23rd, 1834.

M. Renucei, in a letter, announces that he has successfully inoculated the acarus since 1815.

M. Dugès read a zoological note on the genus acarus. He proposed frictions of turpentine for their destruction.

M. Ferrus presented a tænia, taken from an individual in whom the affliction had induced hypochondria, and finally mental alienation. Finding the dried bark of the pomegranate root of no avail, he made an infusion of the dry bark which had undergone fermentation, by the use of which the complete recovery of the patient was accomplished in six weeks.

M. Girardin related two cases of mania cured by the expulsion of tænia.

M. Esquirol also mentioned a case of acute mania cured by the expulsion of ascarides lumbricoides, which, however, being reproduced, the mania recurred simultaneously, and disappeared again on the administration of vermifuge medicines; and another, of a woman

affected with hysterical mania, of which she was twice cured by the expulsion of tænia.

M. Castle observed, that any long-continued irritation would produce mental alienation, and that it was not peculiar to worm affections.

M. Marc had been informed by a naval surgeon, that in three cases out of four he had always found a sensation of tension at the root of the nose existing.

M. Double mentioned, that Dr. M. Hall had already published, in the Philosophical Transactions, an Essay on Sympathetic Mental Alienation.

M. Ferrus had made his observation principally as regarded the efficacy of the bark of the pomegranate root.

M. Girardin wished to present, from an unknown author, a printed essay on the spermatic animalcules. The President wished it to be submitted to the Committee; many of the members resisted it as not required by the rules.—The work was presented.

ACADEMIE DES SCIENCES.

M. Duges read an essay on the sense of vision in the vertebrated animals. He commences by remarking, that, although the structure and function of the eye had been the subject of much research, nevertheless, many of the questions relative to vision yet remained unsolved.

With a view to facilitate the study of the organisation of the eye, the author grouped the elementary organs under the following heads, viz:—the conjunctiva, and the corneal, choroid, retinal, and crystalline systems.

The conjuntiva is physiologically connected with the choroid coat by means of cellular filaments, which traverse the junction of the tunica sclerotica with the cornea; those two structures are also connected by means of the pigment, which in certain animals imparts colour equally to them. This is a new consideration, which supports the theory sought to be established by M. de Blainville, viz. that the organs of sense are appendages to the tegumentary system. The corneal system is composed of the cornea, the tunica sclerotica, and the membrane of the aqueous humour, which lines the posterior part of the cornea, not, however, according to the general supposition, destined for the secretion of the aqueous humour. The curvature of these parts is in a determinate relation to the other retractile structures of the eye; it does not appear to be changed from the pressure exerted by the ocular muscles, for this pressure can only modify the forms according to the distance of the object, and produce the degree of tension necessary to regulate the curvature of the anterior and posterior surfaces of the eye. The choroid membrane, that of Ruysch which lines it, and the two lamina covering the iris, may be considered as one membrane in the form of a sac; its varieties in colour and consistence are not essential, for in different animals they pass from one portion to another; thus the metallic brilliancy of the choroid membrane and the anterior lamina of the iris in fishes presents the shining appearance of the tapetum in the mammifera.

The author described the double series of radiating and concentric fibres of the iris, from the action of which result the dilatation and contraction of the pupil. He denies that the increase or diminution of the opening can contribute to render vision more or less distinct when the distances change.

The thicker part of the retina is considered by the author the centre of vision; the line uniting this point to the centre of the cornea, he terms the *visual axis*. When the optic nerve is not inserted in the centre of the back part of the orbit, the optic axis and centre are different from the visual axis and centre. In animals that have their eyes placed laterally, such as the ruminating species, also in birds, fishes, and reptiles, the insertion of the optic nerve takes place very much behind the orbital centre, though not sufficiently to avoid the necessity of the action of strabismus, by converging the visual axis when an object placed anteriorly is to be regarded intently with both eyes. In man, the visual and orbital axes correspond, although the insertion of the nerve does not coincide with the optic centre, for the insertion of the nerve is not the thickest portion of the retina, the greatest part of its filaments being directed towards the yellow spot, for the most part to diverge from it again, as their true centre and this point coincide precisely with the geometrical centre of the bottom of the orbit, whence it arises that man does not naturally squint.

That the filaments of the retina extend to

the crystalline humour appears to result from the observations of the author. He announces that in the human subject he has observed a division of the retina take place into numerous fasciculi, which, on approaching the ciliary processes, pass between them, and thus become resolved into filaments, and diffused on the capsule of the crystalline humour.

Sitting Sept. 15th, 1834.

A saw of novel construction has recently been invented by a M. Guillon, a naval surgeon. The saw itself is circular, revolving by the combination of wheels. The inventor recommends the employment of this instrument in the section of ribs, or the inferior maxillary bone; to remove the osseous points left by the teeth of the trepan; to extract balls embedded in bone, or to disengage sequestra from the interior of long bones; to remove carious portions of bone, or the sharp projections arising from fractures; for the partial removal of part of one or more of the vertebral rings; for the section of the metacarpal or metatarsal bones; also for the removal of the superior extremity of the femur which has sustained a comminuted fracture; and for the section of the pubis, which M. Guillon proposes to substitute for division of the symphysis.

Foreign Hospital Reports.

HÔPITAL ST. ANDRE DE BORDEAUX.

A Case of Incontinence of Urine from an unusual Cause,

UNDER THE CARE OF M. MOULINIE.

Incontinence of urine appears usually to depend on a spasmodic contraction of the bladder, or a muscular atony of its neck, though it may arise from other causes, as in the case in question. We know that obstacles, offered to a free flow of urine, instead of causing retention, gives rise to incontinence, an effect apparently paradoxical.

Couget, æt. 34 years, was subject to an incontinence of urine, by the constant acrimony, of which the adjoining parts became excoriated, and the continued annoyance arising from it rendered his existence miserable.

His penis had been amputated for a fungous growth consequent on venereal disease, and so closely to the pubis had this operation been performed, that the stump had retracted behind the testicles, and there was a cleft whence the urine flowed.

M. Moulinié considered that the incontinence of urine had thus arisen, from the difficulty of passage caused by the existence of bridles, or a cicatrix at the extremity of the stump; an engorgement of the bladder had taken place, and a constant continual overflowing. By means, therefore, of two semi-elliptical incisions, he removed the excess of skin, and the irregular cicatrix which invested the stump of the penis. He then endeavoured to introduce a probe into the bladder, but found it impracticable, from the prolongation of the cicatrix into the canal. The following day, by assiduous perseverance, a sound was introduced into the bladder. From that time the incontinence of urine ceased, and a cure was gradually effected.

British Hospital Reports.

WESTMINSTER HOSPITAL.

Accidents from the Fire at the Houses of Parliament.

There have not been any cases of burn admitted in consequence of this disastrous event, but three men have been received with serious injuries, resulting from accidental circumstances during the progress of the fire, and one from the violence of a policeman.

John Hambleton, a sub-engineer in the employ of the London Fire Company, was admitted with a compound fracture of both bones of the right leg. He was in a state of collapse from the shock, but improved after the administration of some Port wine. He is now doing well. This is the man who is reported to have had his skull fractured. He has not sustained any injury to that part.

James Ovoran, a shopman, was brought in completely insensible. On recovering, fracture of the spinous processes of the lumbar vertebræ was discovered, but paralysis has not affected any part of the body. He labours under irritation of the urinary organs.

Ralph Raphael, a journeymen hatter, while in the Speaker's garden, was knocked down by a ladder; when picked up he was found to be insensible, but soon recovered. On admission, a fracture of both bones of the right leg was discovered, with considerable displacement and contusion of the integuments. He had also one or two lacerated wounds, but not of consequence. He also complained very much of his back, more especially of the lumbar region. Symptoms of compression afterwards came on, but became less severe in a day or two. He continues in a dangerous state.

Charles Boileau was received into the hospital in consequence of a severe lacerated wound on the left temple, laying the bone bare, and another on the left parietal, more superficial. These were owing to a severe blow received from the staff of a policeman. He has been been labouring under severe symptoms, which are now subsiding.

APOTHECARIES' HALL.

Names of Gentlemen to whom the Court of Examiners granted Certificates of Qualification on Thursday, October 16th:—Rd. Brownlow Barlow, Blackburn; Robert Gledstanes Carey, Guernsey; Charles Henry Cornish, Taunton; George Jameson, Edinburgh; Robert Marsh, Bath.

MISCELLANY OF FACTS.

Fire at the Houses of Parliament.—Great apprehensions were entertained during the progress of this fire that the minutes of the evidence taken before the Medical Committee, as yet unpublished, would be destroyed; but we are happy to state that the whole, or the greater portion, was removed, through the exertions of Mr. Dermott, to a place of safety, ere the destructive element reached the spot in which they had been deposited.

Westminster Medical Society, 26th Session, 1834-5.—Subjects proposed for discussion:—1. On Atmospheric Vicissitudes, and their Influence on the Body in Health and Disease—Dr. Epps. 2. On the Treatment of Cataract—Mr. King. 3. On the Baths of Pfeffers, in the Grison County; their peculiar locality and medicinal agency—Dr. Johnson. 4. On Headaches—Dr. Webster. 5. On Auscultation—Dr. Addison. 6. On Ulcers—Mr. Malyn. 7. On Morbid Ossification—Mr. Thurnam. 8. On Neuralgia of the Foot, cured by the division of the Sciatic Nerve—Dr. Negri. 9. On the different Methods of employing Mercury in the Cure of Syphilis—Mr. Hunt. 10. On Atonic Congestion of the Brain—Mr. Wade. 11. On various Forms of Hysteria—Mr. Edwards. 12. On Neuralgic Pains, and their Treatment—Dr. Copland. 13. On Retension of Urine from Diseases of the Prostate Gland—Mr. Pettigrew. 14. On the Influence of the Mind upon the Diseases of the Body—Mr. Smith. 15. On the Effects of Strychnine—Dr. Ryan. 16. On Homœopathic Medicine. Dr.—Granville. JOHN THURNAM, *Secretary.*

Charing-Cross Hospital.—A case of hydrophobia was received into this institution on Wednesday, which excited intense interest in the medical officers. The patient died at 5 P.M. the same day. Next week a full account of it shall be given.

Edinburgh College of Surgeons, Oct. 15th.—The following are the officers appointed for the ensuing year:—W. Brown, President; T. Lothian, Treasurer; David Clark, Librarian; W. M'Gillwray, Conservator of Museums; Examinators—Messrs. John Gairdner, David Clark, Alex. Macaulay, James Pitcairn, Richard Huie, James Begbie, Jas. Scarth Combe, John Campbell, Arch. Inglis, Wm. Dumbreck, James Simson, and Fras. Farquharson.

A Quarterly Court of St. George's Hospital was held on the 17th inst., at which the resolution of the Special Court of June 27th, for the appointment of a second assist.-surgeon was confirmed.

WEEKLY BILL OF MORTALITY.

London. Tuesday, Oct. 21, 1834

Males 412 Females 410——Total 822

Increase in Burials reported this week 404

APPOINTMENTS.

Naval.—Mr. H. G. R. Page to be assistant-surgeon.

Military.—Assistant-Surgeon D. Scott, from the 36th Foot to be Surgeon to the Forces, vice Melville, who retires upon half-pay. Mr. E. H. Blakeney to be Assistant-Surgeon to the Forces, vice M'Gregor, appointed to the 32d regt.

General.—Mr. E. Murray, Surgeon-Apothecary to the Nottingham General Hospital.

In India.—Assistant-Surgeon D. MacNab, from the 32nd to 3rd Bengal Native Infantry. Assist.-Surgeon J. Bruce, from 57th to 28th ditto. Assistant-Surgeon J. Murray, 28th regt., to the 1st Brigade Horse Artillery, ditto.—Furlough to Europe granted to Assistant-Surgeon J. Colvin, on private affairs, from April 17th.

DEATHS.

Mr. R. Stocker, resident apothecary at Guy's Hospital. Mr. Basil Aitchison, surgeon, of Dalmuir, Scotland. At Quebec, Mr. J. Kirkess, surgeon, late of Edinburgh. Mr. W. Bothwell, surgeon of the Tweed. Mr. J. W. Osborne, surgeon, Dean-street, Finsbury-square.

BOOKS RECEIVED.

A Manual of Aphorisms in Chemistry; the Chemico-Pharmaceutical Preparations and Decompositions of the London Pharmacopœia and Toxicology, comprehending the Symptoms, Diagnosis, Morbid Appearances, Antidotes, Treatment, and Method of detecting Poisons. By ROBERT VENABLES, Esq. London: 1834. Highley.

A Manual for Students who are preparing for Examination at Apothecaries' Hall. Sixth Edit. London: 1834. Churchill.

The Life of Thomas Linacre, M.D., Physician to King Henry VIII., and founder of the College of Physicians in London, with Memoirs of his Cotemporaries, and of the Rise and Progress of Learning, more particularly of the Schools from the ninth to the sixteenth centuries inclusive. By JOHN NOBLE JOHNSON, M.D., late Fellow of the College of Physicians, London. Edited by R. Graves, Esq., of the Inner Temple.

The Surgeons' Practical Guide in Dressing and in the Methodic Application of Bandages. Illustrated by numerous engravings. By THOMAS CUTLER, M.D. 12mo. pp. 195. Taylor.

CORRESPONDENTS.

S. A Pupil.—His proposal will be complied with.

METEOROLOGICAL JOURNAL.

MONTH. Oct., 1834.	Moon.	Thermom.			Barometer.		De Luc's Hygrometer.		Winds.		Atmospheric Variations.		
16		50	58	50	29·53	29·13	75	75	S.S.W.	W.	Fine	Fine	Fine
17	○	54	59	47	29·11	29·35	75	72	W.S.W.	W.	——	——	——
18		51	57	40	29·52	29·69	69	68	W.	W.S.W.	——	——	——
19		47	55	47	29·64	29·62	72	75	S.W.	S.S.W.	——	Cloudy	Cloudy
20		58	60	53	29·58	29·58	76	76	S.	S.	Cloudy	Fine	Fine
21		56	57	46	29·67	30·05	78	76	S.W.	N.W.	Fine	——	——
22		53	56	53	29·70	29·59	76	76	W.S.W.	W.	——	——	——

50, *High Holborn.* WILLIAM HARRIS and Co.

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THE

London Medical and Surgical Journal.

No. 144. SATURDAY, NOVEMBER 1, 1834. Vol. VI.

LECTURES ON THE THEORY AND PRACTICE OF MEDICINE,

BY WILLIAM STOKES, M.D.,

Delivered at the Medical School, Park Street, Dublin.—Session 1833-34.

LECTURE XXXIX.

Specific Powers of Bark—Use of Large or Small Doses of Quinine—Employment of Arsenic—Dangerous Results from—Use of Opium—Remarkable Effects of Pressure—Result of this Treatment in a Case of Hydrophobia—Treatment of the Gastric Intermittent—Researches of MM. Martin and Lembert on the Endermic Mode of Using Quinine—Bleeding in the Cold Stage—Opinions of Dr. Mackintosh—Result of Trials of the Practice in Dublin.

Gentlemen,—At our last meeting I spoke of the use of quinine in intermittent fever. With respect to its modus operandi I may observe, that we know as little of it as we do of that of other remedial agents. The truth is, that this part of medical knowledge is still involved in great obscurity, and that we know almost nothing of the mode of action of various medicines. But that different remedies have different actions, and that there are such things as specifics, seems to be established, and this fact of the existence of remedies, which may be termed specific, is a strong argument against the formula which has been proposed for all diseases by the school of Broussais, viz. *that they are reducible to a plus or minus degree of local vitality*. If this were the case, the peculiar applicability of the properties of bark and mercury, for the cure of certain affections, could not exist. The fact of particular remedies possessing a powerful influence over certain diseases shows, that there is something in those diseases more than a mere increase or decrease of vitality, and that in such instances there is some modification in the phenomena of vitality, which only admits of being modified, or removed, by the action of certain remedies. One of the most remarkable instances of the adaptation of peculiar remedies to peculiar diseases, is the use of bark in pure ague, and I believe I may safely say, that, in pure simple intermittent, bark may be justly called a specific.

In speaking of the use of bark in intermittents, I showed that it might be given either during the paroxysms or the intermissions, but that it was much better to give it during the period of apyrexia, on account of the greater facility of exhibition, and because there was less chance of its being rejected by the stomach. Having alluded before to the different modes of using bark, I shall not take up your time with this part of the subject. Happily for medicine, quinine has completely superseded the use of bark; but where you cannot get quinine, you may employ the bark itself, either in the form of powder, electuary, decoction, or tincture.

With respect to the question whether it is better to prescribe large doses of quinine at considerable intervals, or to give it in small and repeated doses, I have stated, that as far as our experience in the Meath Hospital went, it was decidedly in favour of the practice of giving a large quantity at once. The best way appears to be, to order the patient to take ten grains of quinine at a single dose, about two or three hours before the paroxysm comes on. In Italy, where ague of a severe character is frequently met with, the quantity given at a time is much larger, fifteen and twenty grains being often taken at a single dose by an adult. In some cases as much as 108 grains have been taken before a cure has been accomplished. You can easily understand why such large quantities are prescribed, when you recollect that in Italy and other warm countries, where pernicious ague prevails, it is of the utmost importance to introduce the remedy as soon as possible into the system, for if you are not able to cut short the disease soon after the first or second paroxysm, the patient may fall a victim to its violence. Professor Speranza, in his excellent medical reports, defends this practice, and observes, that it is absurd to maintain that the doses of medicines should be the same in all countries; and when we

consider the different intensities of particular diseases in different countries, we must allow that there should be some variation in the dose.

I spoke of arsenic as one of those remedies which exert a considerable influence over intermittent fever. This medicine, which was imported from the East, was first strongly recommended to the profession by Dr. Fowler, who has given a formula for employing it, and there is no doubt that it possesses febrifuge properties. It is stated, that, in consequence of the establishment of a smelting house for copper, in a particular district of Cornwall, ague, which frequently appeared in that situation, has entirely ceased. You can understand this by recollecting, that in the smelting of copper-ore, arsenical fumes are often copiously extricated.

Sir Gilbert Blane states, that in the ague, which prevailed among our troops at Walcheren, arsenic was used with good effects in cases where bark would not be borne. In these cases it was generally prescribed in combination with opium and aromatics. Under certain circumstances, also, it may be employed with greater advantage than bark; but as a remedy it is decidedly inferior to bark, and there is one objection which applies to it, but not to bark, namely, that in several cases, where arsenic had been employed in the cure of this and other diseases, the patients, after their recovery, fell into a state of bad health, became weak, emaciated, and presented remarkable derangement of the digestive organs. Some of these persons sunk in the course of a few years, others continued to drag on a miserable existence. In several instances, where large quantities of arsenic had been taken for the cure of skin diseases, I have observed that the patients never recovered from its effects, and there can be no doubt that it is a substance highly inimical to the system, and that its long continued use is productive of mischievous results. We should, therefore, decline its employment whenever we can dispense with it, and though we may not be able to procure peruvian bark, or sulphate of quinine, we should recollect that there are many other astringent barks possessed of febrifuge properties, and which may be employed with safety and advantage.

It has been proposed to cure intermittent fever with mercury, and this requires a few observations. In cases where mercury has been used instead of bark, it has been observed that the disease has been checked for some time, but that as soon as salivation disappeared, the disease returned. It produces a suspension of the paroxysm, but does not eradicate the complaint. It is related, that in two ships-of-war, whose stock of bark happened to be exhausted at a time when ague prevailed extensively among the crews, the medical officers had recourse to mercury, and it was found that as soon as salivation was established, the paroxysms of ague disappeared. But three-fourths of the patients thus treated relapsed when the salivation disappeared, and this happened even in cases where mercury had been used three or four times for the same affection. Mercury is certainly of great utility in removing some of the diseases consequent on intermittent, but it does not appear to possess any specific power over the disease. The fact of the subsidence of the paroxysms of an ague on the establishment of mercurial action, has many analogies, for we all know that there is a vast number of diseases which will subside as soon as the mercurial action is set up in the system.

I shall now draw your attention to some other circumstances connected with the treatment of intermittent fever, and first with respect to the management of the paroxysms. In the cold stage, there is scarcely any thing necessary but to keep the patient well covered, and give him mild warm drinks. In very bad cases, the use of the warm foot-bath, the application of warm bricks, or stupes to the feet, and small quantities of warm wine, or carbonate of ammonia, will be required; but I would advise you to be sparing in the use of internal stimulants, unless the cold fits are extremely severe. We may venture to say (and this applies to cholera as well as to the cold stage of ague) that the extent and danger of re-action and its accompanying diseases in the hot stage is often proportioned to the quantity of stimulants used during the cold stage. There is one remedy, however, to which this remark does not apply, namely, opium,—this may be given with advantage at the commencement of the paroxysm. A dose of laudanum will diminish the duration and violence of the cold fit, without increasing the hot, and if combined with some preparation of ipecacuanha, its effect will be still better. What we generally give in the Meath Hospital is, from ten grains to a scruple of Dover's powder. Dr. Fordyce mentions a case of quartan ague which was cured in a few days, after having resisted the use of bark for two years. Two hours before the paroxysm came on, he gave the patient a full opiate draught combined with a small quantity of carbonate of ammonia. The effect of this was to increase the quantity of perspiration during the sweating stage, and produce a change in the character of the paroxysms. The disease then came under the influence of bark, and the patient was rapidly and permanently cured. This case is of great importance, as it shows that in some instances where the disease resists the use of bark, it may be rendered amenable to it by first making an impression on the system with opium, and then trying the specific.

A curious circumstance in the treatment of the cold stage of ague is the effect of pressure on the extremities. If you apply strong pressure to the extremities, particularly in the vicinity of their nerves, it is a fact that the rigors, even though they may be remarkably violent, will often cease. This I have seen

very often. I remember when I was a pupil at the old Meath Hospital, a little boy who was labouring under intermittent, used to send for me as soon as the rigors came on, and beg of me to "hold him," as he said, while the shivering lasted. My practice in this case was to compress the anterior and internal parts of the thigh and opposite arm with all my force, and I have observed that in almost every case where pressure was employed, the hot fit came on much earlier than usual. The same thing was observed by Dr. Kelly in 1794. He advises the use of the tourniquet for this purpose, and states that, in some cases, the hot fit come on in three minutes after its application. It is difficult to explain how the tourniquet acts in arresting the cold fit; at present, I believe, we must confess our ignorance as to its mode of operation. It, however, goes to prove that ague is a nervous disease, for if it were an intermittent gastro-enteritis, as the physiological school teach, how could it be possible to remove it by pressure on the extremities? Besides, we have analogous instances of the same effects being produced by pressure, in other diseases of the nervous kind. We have them, for example, in hysteria and epilepsy. In a very remarkable case of hydrophobia, which was, some years since, under the care of my father, pressure on the extremities was attended with very singular results. The patient, a female child, was brought into the Meath Hospital, with symptoms of well-marked hydrophobia, which had come on some time after she had been bitten in the foot by a rabid dog. The tourniquet was, by my father's direction, applied over the middle of the thigh of the bitten extremity, and he found that as soon as it was sufficiently tightened, the spasms ceased, and the hydrophobic symptoms disappeared, *for the patient could drink freely, and without inconvenience.* During the course of the night the paroxysms came on again; on making an examination, it was found that the tourniquet had become loosened, and had slipped downwards; on being again tightened the paroxysms ceased. After thirty-six hours the tourniquet was removed, and the paroxysms again returned with all their original violence. During the course of a clinical visit, the patient was asked if she had taken any drink; she replied she had not, and *dared not make the attempt unless the tourniquet was applied.* This was immediately done, and she drank freely. In this case my father proposed amputation, but nothing was done, and the little patient died, with all the terrific symptoms of the disease. It is a curious fact, however, that, in this case, the paroxysms were arrested, and the progress of the disease clearly suspended, by the use of the tourniquet.

There is a form of intermittent, common in warm climates, and not unfrequent in this country, to which the name of gastric-intermittent has been applied by Frank, and which is generally met with in the autumnal season. This disease is known by the presence of symptoms of gastro-enteric irritation combined with the phenomena of ague. The symptoms of gastro-enteric disease may be recognised, not only during the paroxysms, but also during the intermissions. The patient complains of thirst, nausea, and loss of appetite; there is a desire for cold drinks, the tongue is loaded, and the epigastrium tender on pressure. The skin is slightly yellow, the eyes have a semi-jaundiced appearance, and the urine is turbid and high coloured. In the treatment of this affection, Frank recommends us to commence with an emetic. I cannot speak from experience of the utility of this practice; he, however, recommends it very strongly. The plan which I would advise you to pursue is the following: you must here hold in view, that there is a combination of intermittent fever with local disease of the gastro-intestinal mucous surface, and that the latter demands your attention as much as the former. In some cases the gastric irritation is so considerable, that if you were to proceed at once to the use of bark, you would in all probability do mischief. After having directed such measures as will abate the violence of the paroxysms, I generally begin with the application of leeches to the belly, and the employment of all the ordinary means to relieve gastro-intestinal irritation. By this mode of treatment, you will find that the gastric character of the disease will disappear in a great degree, and then you can have recourse to bark with safety. In a few cases I have observed, that even without the use of bark, all the symptoms of ague have been removed by treatment directed to the gastro-intestinal disease. If they do not, you can easily give quinine; and where the irritation has been subdued, it will act both safely and expeditiously. Allow me to repeat the circumstances under which you recognise the necessity of leeching and other measures to remove the affection of the digestive tube. These circumstances are drawn chiefly from the state of the patient during the intermissions, for in this kind of ague we seldom have complete apyrexia. Thirst, nausea, foul tongue, epigastric tenderness and fulness, a semi-jaundiced state of the skin and eyes, and turbid high coloured urine: these are the symptoms which mark the co-existence of gastric disease with ague; and, under these circumstances, I would advise you never to omit leeching, the use of purgative injections, mild mucilaginous drinks, and every other means calculated to remove gastro-enteric irritation. When you have accomplished this, you may then employ quinine with safety.

There is one point connected with the treatment of this form of intermittent which you should be acquainted with. It occasionally happens, that the symptoms of gastro-enteritis will disappear, but the tongue still continues foul. It is a common opinion in this country, that the tongue is a correct index of the state

of the bowels; and the inference in such cases would be (according to this opinion), that in these circumstances it would be improper to prescribe bark. If nothing remains, however, but foulness of tongue, it should not prevent you from giving bark, for the state of the tongue here is connected with the morbid condition of the whole system, and not with disease of the digestive tube.

I shall now proceed to make some observations on the endermic mode of using quinine. A number of curious and interesting researches have been made on this subject not long since in France, and it is necessary that you should be acquainted with them. In some cases bark or its preparations cannot be taken internally; the stomach will frequently reject the remedy; and in cases of inflammation of the digestive tube its employment would be dangerous. It has been stated, however, by those who have used it in the endermic mode, that even in cases of ague complicated with gastro-enteritis, they have been able to accomplish a great deal of good, and that quinine may be always employed in this way with safety. The first author who wrote on this subject was M. Martin, who published a memoir on the endermic mode of using quinine, in the Archives Générales. In this memoir he states, that the application of quinine to a blistered surface, even where the quantity employed was very small, never fails in arresting the symptoms of ague. You are to observe, however, that quinine cannot be employed in this way in its simple state; if this were done, it would excite a high degree of irritation, and the proper effect of the remedy would not be obtained. One of the most severe and troublesome forms of ulceration I have witnessed for a long time, occurred in a case where quinine in its simple state had been applied to a blistered surface. Over the whole extent of skin to which it had been applied, numerous ulcerations took place, which resisted for the space of six weeks every attempt to heal them. But it is a singular fact, that when quinine, reduced to a fine powder, is incorporated with a certain quantity of cerate, no such effect is produced. The advantages of this mode of using quinine are, first, that it can be safely employed in cases where its internal use is dangerous, as in the case of gastric intermittent; secondly, it is stated that a smaller quantity will be required than if taken internally; thirdly, that it will act more rapidly; and lastly, that it can be employed with advantage in cases where the patients are averse to taking medicines internally. These are the grounds on which M. Martin claims a superiority for the endermic mode of using quinine. He further remarks, that it cannot be supposed to act as a counter-irritant when used in this manner, for any local irritation produced by it would exert an unfavourable influence over its effects, and render them less certain. All this may be easily understood by recollecting what the phenomena of absorption are, and how they are promoted or obstructed. Where the application of quinine has caused a considerable degree of irritation, a quantity of gelatinous fluid will always be thrown out, and this must obviously prevent the entrance of the remedy into the absorbent vessels. In proof of this M. Martin gives some cases. A robust man, aged 35, had been labouring under an attack of quartan ague, for which he had taken bark internally four times shortly before he came to consult M. Martin. When seen during the hot fit of the next paroxysm, his skin was intensely hot; he had cough, mucous expectoration, and rapid laborious breathing; considerable excitement of circulation, and a red dry tongue. Sixteen ounces of blood were taken from his arm on account of the pulmonary symptoms. In three days afterwards, the paroxysm returned as usual, and on the next morning a blister was applied, and the raw surface dressed with six grains of sulphate of quinine mixed with a quantity of cerate. From this period he had no return of the ague, and his general health improved. In this case no irritation attended the application of quinine. He gives another remarkable case. A woman, aged twenty-three, who had oppression of breathing, pain in the chest, and cough, was attacked with quartan ague in the month of September, but recovered under treatment. The ague again returned in the following December, accompanied by hard quick pulse, difficulty of breathing, and cough. In this case also venesection was performed. The patient had then four grains of quinine applied to a blistered surface, and the paroxysms never returned. The blistered surface in this instance was somewhat red, but the irritation disappeared rapidly. In both these cases you will observe, that bleeding was performed before quinine was employed, and so far as they go, they cannot be looked upon as unexceptionable examples of the cure of intermittent fever by the endermic mode, as from the researches of Dr. Mackintosh, we learn that many cases of the disease will recover after bleeding in the cold stage alone.

M. Lembert, another writer on the same subject, states, that in ten minutes after the application of quinine to a blistered surface on one of the extremities, a sensation of gentle warmth diffused itself along the limb towards the trunk, and so on over the whole body. The hot fit, says he, also comes on much sooner than usual, and the violence of the whole paroxysm is diminished. The sensation of warmth is coincident, according to his account, with a diminution of the symptoms and an increase of muscular power, and he thinks that the reduction of heat during the paroxysms is a necessary consequence of this mode of using bark. There is another case given, which exemplifies some of his statements. A stout young man, who had got ague during the expedition to Spain, presented himself with the usual symptoms of the dis-

ease, accompanied by foul tongue and a semi-jaundiced colour of the skin. For the space of ten days, he took from eight to ten grains of sulphate of quinine daily, but without any improvement. The quinine was then applied to a blistered surface. His paroxysm came on after the application about the usual time, but its duration was half an hour shorter than before. The next attack was also shorter, and the fifth was prevented altogether by applying ten grains of quinine at once. He was then considered to be cured, but about fifteen days afterwards, in consequence of an error in diet, he got another attack. The endermic mode was again tried, but without success; the internal use of quinine was then resorted to, and was followed by a perfect cure.

These facts do not show that the external mode of using quinine has any great advantages over the internal. Where it would be improper to prescribe it internally, it is certainly a valuable mode, but it remains to be proved whether employing it in this way be preferable to giving it by the mouth or in the form of enema.

I shall now make a few observations on the last subject connected with the treatment of intermittent fever, and this is, the proposition of bleeding in the cold stage, put forward so ably by my distinguished friend Dr. Mackintosh, of Edinburgh. In the writings of almost all the older authors, it was laid down as an undoubted fact, that the cold stage of ague was essentially a stage of debility; they saw that the cold stage of intermittent fever was attended with considerable prostration of the powers of life; they regarded it as one of pure debility, and they completely overlooked its effects on the viscera. From an accurate observation of the phenomena of the cold fit, from perceiving that the signs of a retreat of blood from the surface to internal parts were evident, from ascertaining by dissection that the viscera were overloaded with blood, and from recollecting that in chronic cases of ague visceral disease was of constant occurrence, and often the cause of death,—from all these circumstances, Dr. Mackintosh was led to conclude that the old idea respecting the cold fit was a mistaken one, and that much good might be done by bleeding in the cold stage, so as to relieve the congestion of internal organs. This idea he entertained for some time without venturing to put it in practice, so strong were the existing prejudices against any kind of depletion in what was looked upon as a distinct example of debility; he ultimately, however, determined to make trial of it, and with the self devotion which characterises true science, first put it in practice on himself. On being attacked with intermittent fever, he boldly rejected the venerated dogmas of the schools, and had himself blooded in the cold fit. The operation was performed, and so far from any of the dreaded results occurring, it was followed by great relief. Since that time, the remedy has been extensively tried, and he has given an interesting and detailed account of it in his admirable work on the practice of physic.

An incorrect view of Dr. Mackintosh's opinions on the treatment of intermittent fever has been taken by some persons. It has been said that he neglects and disregards bark, and that he considers bleeding in the cold stage as the only remedy required for the cure of ague. This is not true. All that he proposes to establish is, that there is congestion of the viscera during the cold stage, and that although the phenomena of debility are present, blood may be taken away safely and with the greatest possible relief in many instances. Of course all those persons who are attached to the practice of studying and prescribing for names rather than actual diseases, are still opposed to Dr. Mackintosh's treatment, for nothing shocks them so much as that which has a tendency to overturn and expose their favourite dogmas. For this reason they looked upon the new opinions as heterodox, and the practice as a dangerous innovation. Notwithstanding all this, no sensible practitioner can entertain a doubt that Dr. Mackintosh has conferred a most valuable boon on medicine, first, by demonstrating the real nature of the cold stage of ague, and, in the next place, by showing that bleeding may be performed in it with safety and advantage.

It is a question, however, which remains to be discussed, whether we can have recourse with safety and success to this mode of practice as the ordinary treatment of intermittent in this country. My own impression is, that, in this country, the practice is unnecessary in the great majority of cases, and that you can remove all the simple cases of ague with certainty and safety, by means of the specific alone. I told you in a former lecture, that I had endeavoured to render my experience on this subject as extensive as possible, and that during the epidemic ague of 1827, I had made trial of Dr. Mackintosh's practice on not less than one hundred patients. Now the general conclusions which I was induced to draw from an accurate examination and comparison of these cases were, that, in the vast majority, bleeding in the cold stage of an intermittent may be performed with safety; that there is very little or no danger of the patient dying of debility, as was formerly apprehended; and that, in many cases, this treatment was found to diminish the violence and ameliorate the character of the paroxysms, and, in some, had the effect of completely arresting the disease. Dr. Mackintosh has witnessed several cases in which bleeding in the cold stage has cut short the disease at once, and of this I am fully convinced, but I believe it to be a rare occurrence. I have certainly seen it in a few cases. In one instance, where the ague had resisted the ordinary treatment for a considerable time, the patient was cured at once by bleeding freely in the cold fit. As far as my recollec-

tion goes, the number of cases in which this singularly favourable termination occurred, did not exceed three or four.

But, you will ask me, did I observe any bad effects to result from this practice? I have seen some cases in which the cold and others in which the hot fit were increased in violence after bleeding in the cold stage. I have seen several cases in which the paroxysms were brought more closely together, and the period of their occurrence anticipated. Now this is a very unfavourable occurrence, for the nearer an intermittent approaches to remittent fever, the more unmanageable it is, and the less is it under the influence of bark. This observation has been further confirmed by my friend Mr. Gill, who went into the fenny parts of Lincolnshire during the prevalence of an epidemic ague, to put the practice to the test. In a communication which he made to me on this subject, he states that he felt quite certain he had it in his power to convert many cases of intermittent into continued fever by bleeding in the cold stage.

We observed also in the Meath Hospital some other effects, which, however, do not particularly apply to bleeding in the cold stage, as they have been observed to follow the employment of other measures,—I allude to the supervention of new diseases. I have seen cases of intense pneumonia, of inflammation of the brain, and of gastritis, occurring immediately after the disease had been cut short by bleeding. This, however, is no argument against the practice of Dr. Mackintosh, for the same thing might happen where the paroxysms had been arrested by bark. I have hazarded a conjecture in one of my clinical lectures, that if bleeding in the cold stage were useful, it would be chiefly in the intense agues of warm climates. Where life is threatened by the violence of the congestion, or by the excess of inflammatory action in warm countries, in such circumstances I think bleeding may be looked upon as a valuable remedy in intermittent fever. Since that period, Dr. Mackintosh has received a number of communications from the East Indies, and from these it appears that the practice has been attended with great success.

I may remark, in conclusion, that the foregoing observations apply to almost all the cases which came under our care in the Meath Hospital, for in almost every instance we were obliged to have recourse to bark after the use of the lancet, and we could not say that the patients required less quinine than those who had not been blooded. However, in all cases of intense congestion, but particularly in the pernicious ague of warm climates, I think this practice of great utility, and I am also inclined to think that it may be employed with advantage in cases where bark, after a sufficient trial, does not exert any influence over the disease. Under all circumstances, the medical profession is deeply indebted to Dr. Mackintosh, for being the first to demonstrate the real nature of the cold stage of ague, and that the visceral congestion may be relieved by bleeding; and it is to be remarked, that my chief trials of the treatment were made on the cases of *an epidemic fever*, a circumstance which of course diminishes the value of my results, as arguments against the treatment of sporadic or ordinary cases.

LECTURES
ON
MIDWIFERY & THE DISEASES OF WOMEN AND CHILDREN,

BY EDWARD RIGBY, M.D., F.L.S.,
ASSISTANT PHYSICIAN-ACCOUCHEUR TO THE GENERAL LYING-IN HOSPITAL.

Delivered at St. Thomas's Hospital.

LECTURE V.

Continuation of Leucorrhœa.

Gentlemen,—From what I said at my last lecture respecting the different species of leucorrhœa, you will see that it may occur under four distinct forms; firstly, where the mucous secretion of the vagina is *merely increased*, without inflammation, &c., of this canal, and where, though more watery than usual, it still preserves the character of mucus; secondly, *the active leucorrhœa*, which is, in fact, nothing more or less than acute inflammation of the mucous membrane of the vagina, and which is attended with symptoms, and runs a course very similar to acute inflammation of other mucous membranes; the discharge is at first profuse and watery, becoming puriform, and then gradually returning to the mucous character as the disease yields; there is heat, pain, swelling, and redness of the parts, frequently accompanied by much febrile excitement; thirdly, *the chronic leucorrhœa*, which is frequently a consequence of the former species, and which differs materially from the simple form, both in the history of the case and in the appearance of the discharge, which is watery, and streaked with sero-purulent matter, and occasionally fœtid; this species, in some cases, evidently comes from the uterus itself, and, if of long standing is generally connected with organic disease; the fourth species is *the white mucous discharge*, which is accompanied by an inflammatory state of the glands of the os and cervix uteri. Let us now examine the *causes* of these different forms of leucorrhœa. The causes of simple leucorrhœa are all those which produce an atonic state of the vagina; dyspepsia, and every derangement of the chylopoietic viscera, profuse menstruation, rapidly succeeding pregnancies, frequent abortions, and the debility produced by severe uterine hæmorrhages, either in labour at the full term or in abortion, suckling, when there is not sufficient strength of the system to bear it, late hours, hot rooms, impure air, indolence, luxurious habits, over fatigue, and the various depressing passions of the mind.

Acute leucorrhœa is produced by many of the same causes which bring on an inflammatory action of the mucous membranes in the other parts of the body; thus exposure to cold, suppressed perspiration, suppression of the menses, repelled eruptions, catarrh suddenly checked, cessation of discharges from some other parts of the body to which the system had become accustomed, will all act as causes of acute leucorrhœa.

Violent exercise, especially riding on horseback, excessive venery, &c., will have the same effect, but these two last mentioned causes rather apply to that form where the cervix uteri alone is inflamed, and which is accompanied by the white cream-like discharge. There is also another set of causes which may produce this condition, I mean those which act by irritation: among these we may mention local displacements of the uterus, especially prolapsus, local tumours of the vagina or uterus, of the latter polypus in particular, stone in the bladder, disease of the urethra, a loaded state of the rectum, the presence of hard scybalæ, or of ascarides; a pregnant uterus may act in this manner, and also by the increased local determination which pregnancy produces; the impaction of a pessary, or of a piece of sponge introduced for other purposes into the vagina, has sometimes been the unsuspected cause of a long standing leucorrhœa *.

There are few diseases which have proved more intractable, or in the treatment of which more mischief has been done than in leucorrhœa. Our practice must be entirely guided by the peculiar form of the disease, and by the set of symptoms which accompany it. The indiscriminate exhibition of tonics and local application of astringents in every case, cannot be too strongly condemned, and if you paid attention to the symptoms which I have enumerated as accompanying some forms of leucorrhœa, and the causes which induce them, it will be almost unnecessary for me to explain why such practice in some cases should prove so injurious. "In many cases (says Sir C. Clarke) it is as injurious to restrain the discharge from the parts, as it would be to put an end to the natural salivation of a teething child, whilst the determination of blood to the head continues, or to heal an ulcerating surface in a constitution which has been long accustomed to it, without substituting some other secretion for it." In the simple form of leucorrhœa, which is *always* attended, and (as I have before said) so frequently produced, by general atony of the system, and especially derangement of the chylopoietic viscera, our first object must be to restore the tone and vigour of these functions. Mild alteratives and tonics are the medicines we must exhibit in these cases, and, as in amenorrhœa, you will find the combination of mineral acids with bitters of great service, in fact, precisely the same treatment, which I have there recommended preparatory to taking steel, will be applicable here; there is the same condition of the gastric and hepatic systems to contend with. The bowels must be regulated by mild doses of blue pill combined with Dover's powder, or extract of rhubarb, if they be sufficiently open, or with compound extract of colocynth, with or without the extract of gentian, if confined; a bitter infusion, with nitric or sulphuric acid and tinct. hyosciami, should be given two or three times a-day. In this manner we may proceed to the use of the quinine, or bark itself, and sulphuric acid, and thus gradually prepare the system for chalybeate medicines. Besides these remedies, the shower-bath or cold bathing may be used, and especially salt-water, or sponging the back and loins freely with cold vinegar and water, or hip-bathing. The only local remedy which is required in this form is a tepid injection of liq. plumbi acetatis, in the proportion of ℥j. to ℥iv. of distilled water, into the vagina night and morning.

In the acute form our treatment must be very different; the pain and general excitement must be carefully marked, for it will frequently require leeches to the back, groins, or labia. The application of leeches to the os uteri itself, is a mode of practice which has not been sufficiently attended to, and which is peculiarly valuable in these cases, as we are thus able to draw blood from the immediate seat of the disease. The tube recommended by Dr. Locock, is eminently adapted to this purpose, and enables us to apply several leeches at once with perfect facility. "A low diet, perfect rest, and antiphlogistic treatment are necessary, the bowels should be kept fairly open by saline purgatives and castor oil, avoiding aloes, scammony, or others of a drastic nature; warm hip-bathing is very useful, and injections into the vagina of warm water, decoction of poppy-heads, or solution of the superacetate of lead *."

In the chronic or sub-acute form, our plan of treatment will be much the same as in the simple form; the functions of the chylopoietic viscera and general tone of the system must first be restored, and then we may resort to some of the numerous remedies which have been recommended for this condition. Copaiba has been used, from its known efficacy in gonorrhœa, but I have never had any reason to try it. Dr. Dewees has strongly recommended the use of the tinct. of cantharides in this form of leucorrhœa; "we always commence," says he, "with a direction that the parts are be regularly washed with warm water three or four times a-day. If the patient be plethoric, we cause her to be well purged, confine her to a milk and vegetable diet, and sometimes order her to lose blood. When the pulse is sufficiently reduced by these means, or if the pulse be in a proper condition without them, we then commence with the tinct. of cantharides.

* Locock, Cyclop. of Pract. Med.

* Locock, op. cit.

Of this, we direct thirty drops every morning, noon, and evening, in a little sugar and water, increasing the dose every third day five drops at a time, until strangury is produced, unless the disease be arrested, which is not unfrequently the case before the symptom appears. Should the complaint withstand the first strangury, we are not to be discouraged, but re-commence the tincture at the original dose of thirty drops, and increase it as before until a difficulty of making water be again experienced; it rarely, however, withstands the second irritation of the bladder. We always direct our patient to desist from the use of the tincture so soon as she feels the approach of strangury, and not resume it until all uneasiness disappears; if the strangury be severe, we direct the free use of flax-seed tea, barley-water, or gum arabic water, to take thirty-five drops of laudanum, and go to bed. Should this not succeed, we direct an enema of a gill of thin starch, a teaspoonful of laudanum, and thirty grains of finely powdered camphor; so far as we at present recollect, this last remedy has never failed*." The whole article I recommend to your perusal, it contains many useful and practical observations, but appears to refer only to one species of leucorrhœa. I rarely use any of the stronger astringent lotions until I have ascertained that the Goulard is insufficient, nor do I consider the time thus employed as lost, although I may not have succeeded in checking the discharge, since the acetate of lead exerts a soothing effect upon the vagina, and removes any inflammatory state should it be present. When once I have satisfied myself on this point, I have then recourse to more decided astringent remedies, generally combining a mineral and vegetable astringent together; for instance, decoction of oak or elm bark with alum, or sulphate of zinc, pomegranate bark, &c., &c. Solutions of the nitrate of silver have been used, varying in strength from three to forty grains in an ounce of distilled water, but I must confess that the acetate of lead has generally answered my purpose.

The sedative lotions are most serviceable when there is an acrid discharge, with heat and excoriation, or where there is much inflammatory action with local pain. In some severe cases, Dr. Locock has introduced into the vagina a piece of lint soaked in a liniment, consisting of equal parts of Goulard's extract, Battley's laudanum, and mucilage, with much benefit. Where we have not only the discharge to contend with, but also a very relaxed state of the vagina, which is a frequent concomitant of the chronic form, astringent injections are generally necessary, and, besides those already mentioned, we have a variety of others, as kino, catechu, galls, green tea, &c.; but as this relaxation of the vagina is intimately connected with prolapsus uteri, and the most frequent cause of this displacement, I shall delay entering more particularly upon their use until I come to speak of its treatment. In that form of leucorrhœa where the glands of the os and cervix uteri are inflamed, and where this part is felt enlarged, hot, and throbbing, and is very painful to the slightest touch, the application of leeches directly to the part, by means of the tube I have mentioned, will produce great relief: this generally requires to be repeated once or twice, at the intervals of a week, and if you can ascertain the exact accession of a menstrual period, you will find the application of leeches about two days before that time of peculiar advantage. The vagina should be well washed out with warm water to remove any mucus previous to applying the leeches, and also afterwards, in order to encourage the bleeding as much as possible. In the intervals, the patient should use a warm decoction of poppy heads two or three times a day; but this must be done cautiously, for if the acetate of lead acts too much as an astringent, and checks the discharge too suddenly, the pain and inflammation will in all probability return. The bowels should be kept in a relaxed state by mild doses of sulphate of magnesia, &c., in order to prevent the rectum becoming distended with hard fæces, and pressing upon the inflamed cervix; even where the patient expresses herself as well, you will find that in all probability she will have an attack of pain shortly before the next menstrual period, which, although relieved to a certain degree by the discharge of the catamenia, is apt to bring on a return of her former symptoms. This you may very successfully guard against, by directing her to take a larger dose of the laxative than usual for a day or two before the expected accession of the menses, and thus relieve that state of congestion which exists in the uterine circulation at this period. I am very desirous, gentlemen, to impress upon your minds these practical points respecting the treatment of the white mucous discharge, because if you follow the directions I have now laid down, you will not find it so intractable a disease as has been commonly supposed. I am the more anxious that you should thoroughly understand the principle of treating this inflammatory condition of the cervix uteri, because, if neglected or improperly treated, I have reason to believe that its structure will become indurated, and thus give rise to organic disease; it is here that the induration of schirrus (generally speaking) is first felt; it is here that the ravages of carcinoma first make their appearance; and knowing how liable glandular structures in other parts of the body are to these organic diseases, it behoves you to watch with a suspicious eye every symptom which betrays a congested or inflamed state of the cervix uteri, and promptly to arrest its course by the remedies and plan of treatment I have just described.

* Dewees' Compendious System of Midwifery.

Leucorrhœa is occasionally produced by a mass of hardened fæcal matter in the rectum, or by ascarides; in the former, the common enemata employed for such purposes must be had recourse to. Where ascarides are present, I generally find them removed by an injection of pretty strong chamomile tea. Dr. Locock has used an enema of soap and turpentine with good effect. This cause of leucorrhœa, however, is rarely seen except among children. The leucorrhœa of pregnancy will require cautious management, and, above all, great attention to the state of the bowels, which are so apt to become constipated at this time. I should be afraid, in these cases, to use any other injection than the mild saturnine lotion, and have generally found that this treatment, combined with rest and spare diet, is successful.

In these cases, the practitioner should always be able to command a variety of mild laxative formulæ, and vary them according to circumstances, for purgatives are rarely admissible; the confect. sennæ, castor oil, infus. rosæ, with magnes. sulph., cream of tartar and sulphur, &c., and the occasional use of enemata, will succeed in keeping up a sufficient action on the bowels without irritation.

The last point to which I shall allude is, that leucorrhœa, especially when the discharge is purulent or acrid, is liable to produce a discharge from the penis after sexual intercourse, very much resembling actual gonorrhœa. It is very difficult, and I think it impossible, to distinguish between gonorrhœa and certain forms of leucorrhœa, especially where there is much heat and redness of the external parts and the discharge purulent; it may lead to much unpleasant feeling between man and wife, and it is for the practitioner, whenever it is in his power, to remove unjust suspicions and satisfy the husband's mind, by a rational explanation of the real cause.

This brings me, gentlemen, to the consideration of a subject, which is intimately connected with leucorrhœa, I mean *prolapsus uteri*, a species of displacement, which is more dependant on leucorrhœa and the relaxation of the vagina which accompanies it than any other cause.

The uterus sometimes descends from its usual situation in the upper part of the pelvis to the lower aperture, so that the os uteri may be felt near to the external opening; at other times it descends entirely out of the vagina, being situated external to the labia: in the one case it has been called *incomplete, or partial prolapsus*, in the other *complete prolapsus*. Patients labouring under partial prolapsus suffer a good deal of inconvenience, partly from the pressure which the prolapsed uterus exerts upon the neighbouring parts, especially the bladder and rectum (considerable obstruction to the evacuation of their contents being produced, some patients having complete retention of urine, unless when lying in the horizontal position, and pressing up the uterus with their fingers), and partly from the tension and dragging of the parts which are connected with the uterus, producing much pain in the region of the pelvis. All these symptoms increase when the patient stands for some time, diminish when she lies upon her back in the horizontal posture, and disappear entirely when she presses up the uterus with her fingers. From the appendages of the uterus gradually accommodating themselves to this state of tension and displacement, you will understand why the symptoms at first are more severe, and afterwards gradually diminish, and also why they are more acute where the prolapsus comes on suddenly, than where it increases slowly. Where prolapsus is produced by sudden violence, we occasionally see it followed by syncope, hæmorrhage, fever, and inflammation.

Where the uterus descends entirely out of the vagina, and thus becomes complete or total prolapsus, the symptoms which had arisen from the pressure of the uterus upon the neighbouring parts disappear, whereas those which arise from the attachments of the uterus being violently stretched and distorted into an unnatural shape and position, become greatly aggravated.

The cervix uteri, as it descends lower, draws down with it the upper part of the vagina, which covers it; where the whole of the uterus protrudes beyond the labia it drags down the whole vagina, which thus becomes inverted, and covers the external surface of the uterus; in this state the uterus is, as it were, suspended from the labia, nor is there any space between them on either side, into which one can pass the finger, or a probe; this can never happen without the rectum, or bladder (both of which are intimately connected with the uterus), being very much pulled out of their situation; the bladder is always turned backwards, so as to take the place of the uterus in the pelvis, and, with its urethra, lies in a horizontal position, so that we frequently see patients, under these circumstances, discharge their urine either directly forwards, or even upwards; hence, where the catheter is required to be used, which is frequently the case, it must be introduced backwards, in an horizontal direction, towards the rectum. The circulation being more or less impeded when the uterus is prolapsed it swells considerably, and hæmorrhage sometimes comes on to a considerable degree; the inverted vagina, which covers the uterus, becomes by degrees so changed as to have the appearance of skin; where the prolapsed uterus, under these circumstances, is of a cylindrical shape, as is sometimes the case, it bears some resemblance to a penis, and this is one of the sources of those extraordinary tales of hermaphrodites which we occasionally hear of; the irritation from the clothes, and the constant trickling of the urine over the tumour, very frequently produce ulceration of

its external surface, which is excessively painful and troublesome, and often attended with very serious results.

Where the prolapsus takes place suddenly, it is frequently followed by violent pain in the whole abdomen, tenesmus, retention of urine, syncope, and fever. In this case, however, the parts soon accommodate themselves to the unnatural situation and state of tension, so that one frequently sees neglected prolapsuses of long standing, which comes down whilst the patient stands or walks, but goes up again when she lies down, and causes her little or no inconvenience.

The partial prolapsus requires to be distinguished by vaginal examination: this must be done in the upright posture, because when lying down the uterus easily returns to its natural situation; it is better not to make this examination in the morning, shortly after she has risen, or when she has been some hours without evacuating the bladder or rectum. In the first instance the uterus, which always goes up in the horizontal posture, has not yet descended so low as usual; and, secondly, when the bladder and rectum are distended, they prop up the uterus and prevent it from descending far, so that if you examine under these circumstances, you will either find no prolapsus at all, or at least not in the degree in which it is actually present. On examination, we find the uterus distinctly in the vagina, and the os uteri quite low down, close behind the external opening, so that the diagnosis of partial prolapsus is by no means difficult; the practitioner *can* only mistake it for another affection, viz. polypus in the vagina, but if he examine with attention the difference is very manifest.

The diagnosis of *complete prolapsus* is still easier.

The *causes* of prolapsus uteri act in two ways: they either produce relaxation of the parts which retain the uterus in its natural situation, or consist of some forcible means by which the uterus is pushed or dragged down; hence it is why women, who have borne children, especially mothers of large families, are *chiefly* the subjects of prolapsus uteri, for we rarely meet with it in unmarried females, or girls.

Prolapsus uteri is very liable to come on soon after labour, when the passages are not only relaxed and dilated, but the uterus very bulky and heavy; the chief cause, however, of those which act by relaxation of the parts, is, as I before mentioned, a state of leucorrhœa, the nature of which I have already discussed: the vagina becomes relaxed, and no longer supports the uterus, it descends lower into the pelvis, and, from its presence in the vagina, produces an increase of discharge, and therefore of the general debility; the circulation in the uterus being impeded, and from the irritation produced by the neighbouring parts pressing upon it, it swells considerably, the vagina becomes more dilated, and yields still more readily to the increased weight of the uterus, until at last it becomes completely inverted, and the whole uterus protrudes at the os externum. Where the perinæum has not been much injured by previous labours, the uterus not unfrequently descends as low as this point, and there remains, being supported by the perinæum.

The other set of causes are where prolapsus is produced by violence, as falls, or other severe concussions of the body, such as violent straining in coughing, or vomiting, lifting heavy weights, &c. These causes are the more certain of producing it when they are continually renewed and repeated, especially when the patient, at the moment, is in the upright posture; this is the reason why we observe prolapsus uteri to be so common among poor women, who are exposed to daily hard labour; but at no period are these causes so liable to induce prolapsus as shortly after parturition *. Prolapsus uteri does not easily take place during pregnancy; on the contrary, as pregnancy advances, the uterus, which had been partially prolapsed, returns to its natural situation.

There are few affections which have been more irrationally, and sometimes, I might almost say, cruelly, managed than prolapsus uteri. From the mistaken notion that the uterus owes its support to the broad and round ligaments, and not to the vagina, little attention has been paid to the condition of the vagina, and still less to that of the general health; because the uterus was prolapsed, of course it must be supported, and therefore ingenuity has been taxed to invent an immense variety of pessaries to hold up the uterus in its natural position. The most common are the flat circular pessaries with a hole in the middle. These are of different sizes, according to the degree of dilatation. The pessary is passed up edgeways, and then turned across the vagina by the finger, being retained there by the tightness with which it fits this canal. I shall not detain you, gentlemen, by attempting to enumerate, still less to describe, the various sorts of pessaries which have been invented; suffice it to say, that I exclaim most strongly against their use. What are our indications in the treatment of prolapsus uteri?—The vagina is relaxed; it has ceased to support the uterus, which is therefore prolapsed; hence our object must be to restore the tone and contracted rugous state of the vagina; and, when we succeed in doing this, we cure the prolapsus. A pessary produces the very thing we wish to avoid, *it dilates the vagina;* hence it is why the pessary often requires to be changed, and a larger one substituted, until at last the passage becomes so dilated that it will not hold at all. Where

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* Richter.

the common pessary does hold, it is only a temporary palliative cure; for, although the lower portion of the vagina may have contracted, still the upper part which supports the uterus is kept dilated by the presence of the pessary; and when this ceases to be worn, the uterus soon returns to its former displacement. I need scarcely mention the inconvenience it must be to a married woman; but this is by no means the most serious evil: it frequently produces much irritation, and even injury to the neighbouring parts, and, from the vagina being constantly stretched upon a hard substance, it becomes callous at the part, and incapable of contraction when the pessary is removed; it becomes imbedded in the thickened parietes of the vagina, and thus it is that I have occasionally seen severe suffering produced in extracting a pessary which had been retained too long in the vagina. The whole system of pessaries, in the common acceptation of the term, is unphilosophical and impractical. The plan I adopt is as follows:—After having attended to the general health, and restrained the leucorrhœa, if there be any, by the treatment recommended under that head, I use the stronger astringent injections, keeping the patient as much in the horizontal posture as I can. After a day or two thus spent in restoring some degree of tone and contraction to the vagina, I roll up a soft piece of sponge into a cylindrical shape, and, winding it round loosely in a spiral direction with string to prevent its expanding beyond a certain size, I soak it in the astringent, and pass it into the vagina. In cases of complete prolapsus of long standing, the parts have so accommodated themselves to their unnatural position, that the uterus will not stay up for a moment when replaced, although the patient preserves the horizontal position. Under these circumstances, we must use the sponge at once instead of the syringe. This is much more easily introduced than a common solid pessary, and the patient soon learns to do it herself, in order to renew it three or four times a day. It produces no uneasiness, especially where she has previously used the astringent for an injection, for she can increase or diminish its strength according to her own feelings; and, from being encircled with string, it cannot dilate the vagina, which, being thus kept in continual contact with the astringent, contracts firmly upon the sponge, and thus effectually keeps up the uterus.

For the use of the sponge, or, as he calls it, *the medicated pessary*, I am indebted to my friend, Dr. Locock, and a most valuable remedy it is, for, in the most aggravated cases, I have never known it to fail. Except under this form, I have never passed a pessary in my life, and am convinced that scarcely under any circumstances are the common pessaries admissible. Although I have generally found that oak bark and alum form an injection of sufficient strength to induce the necessary degree of contraction, there are others still more powerful, which have been recommended by Sir C. Clarke; for instance—

℞. Cort. granat. contus., ℥ ss.
Aquæ distillatæ, ℥ xiij.
Coque per sextam partem horæ et cola, dein adde liquori colato aluminis ℥ij.

Again—

℞. Gallarum, ℥ss.
Aquæ distill., ℥xviij.
Coque ad ℥xvj.

℞. Liquoris colati, ℥xvss.
Sp. rorismarini, ℥ss.
Aluminis, ℥iij.

Another still more powerful one is the following:—

℞. Decocti quercus, lb.j
Tinct. catechu, ℥ss.
Aluminis, ℥ ij.
Zinci. sulph., ℥ j.

In reducing a *complete* prolapsus uteri, especially when of long standing, there are a good many difficulties to contend with. Whenever we have reason to expect that the reduction will not be easy, it should be done in the morning, whilst the patient is in bed, who should lie upon her back, with her hips elevated. It will also be necessary to empty the rectum previously by an injection. Cases have sometimes occurred, where, as soon as the prolapsed uterus had been reduced, the oppression and pain in the abdomen, with constipation and other symptoms, had become so violent, that it became necessary to bring the uterus down again. Where the case does not admit even of gradual reduction, the uterus should be supported by a proper suspensory for the purpose. Superficial ulcerations upon a prolapsed uterus are no hindrance to their being returned; on the contrary, they require it. It is not the external surface of the uterus, but *the internal surface of the vagina*, that covers the prolapsed uterus, which is the seat of these ulcerations; so that we are just as able to apply any remedies which may be required to the ulcerated surface, *after* the uterus has been returned. The causes of the ulceration, viz.—the dribbling of the urine over the tumour, the friction of the clothes, the congestion and obstruction in the circulation of the prolapsed part, are all removed by the reduction of the tumour; and, generally, as soon as this is effected, the ulcerations heal of themselves; whereas, so long as the uterus remains prolapsed, they are very difficult to heal. The prolapsed uterus is sometimes much inflamed and swollen: in this case it will be necessary to delay its reduction until the inflammation shall have been removed, or, at least, diminished, since it would produce great suffering, or even be impossible to reduce it in this state.

LECTURES
ON
FORENSIC MEDICINE,
DELIVERED BY
DR. HAY GRAHAM,
At the Westminster School of Medicine.

LECTURE III.

Marriage—Legal Condition required—Conception—Ages of Uterine Life—Period of Gestation—Delivery.

GENTLEMEN,—As marriage is appointed for the legal propagation of the species—that "they should increase and multiply," it follows, that any physical condition which may render the union of the sexes fruitless, becomes a subject of medico-legal investigation, and is of itself sufficient to authorise the dissolution of that social contract, where one or other of the parties is incapable of performing his or her share of the obligation mutually imposed.

The questions on this subject may be reduced to two heads, namely, those of a physical, and those of a moral, nature.

The too near consanguinity of the parties creating a bar in opposition to marriage is a subject belonging to medical police, and, as such, does not fall within our province; but it is a physiological fact, that by "breeding in and in" (as it is termed by agriculturists), not only does the race become small and puny, but the diseases which are successively acquired by the ancestors are propagated and accumulated in the descendants. This takes place not only in respect to diseases, but also in peculiarities of organisation; as for example, in case of individuals with six fingers, which is further illustrated by the celebrated Dorking breed of poultry, which has an extra claw. It is ascertained, that if a flock of sheep, in which there is any defect, are permitted to breed *in and in*, the defect will gradually increase among them; by these means, a gentleman, who selected for breeding a marked variety, succeeded in procuring a flock, all of them with deformed bones. The turnspit dog is a similar instance of deformity, being a variety of the terrier, in which the rickets is propagated. It is from the frequent intermarriages of royal and noble families that imbecility and insanity so much prevail among them; the race gradually degenerates and dwindles away, corporeally and mentally, until at last it becomes extinct. Nature has wisely imposed her boundaries to keep all things perfect and distinct; thus the crossing of different species produces the unprolific mule; and a race that has degenerated to a certain point ceases to propagate.

> "Sunt certi denique fines,
> Quos ultrà citràque nequit consistere rectum."

In treating on the subject of marriage, we will take a view of the legal conditions which are required.

1st. In England, no male or female can be legally married until they have attained the legal age of puberty, which is twelve years in the female and fourteen in the male. But, physiologically, none ought to marry before they have at least completed their growth; for the health and constitution are not till then confirmed—about twenty-three in the male and nineteen in the female. Perhaps the best ages are between twenty-five and thirty-five for the male, and between twenty-two and twenty-eight for the female.

2nd. Idiots cannot contract marriage, because idiots not being capable of reasoning, cannot consent to anything, and consent is necessary to marriage.

3rd. Neither can lunatics marry, unless the marriage was in a lucid interval. "But the marriage of lunatics and persons under phrenzies (if found lunatics under a commission, or committed to trustees by any Act of Parliament), before they are declared of sound mind by the Lord Chancellor, or the majority of such trustees, shall be totally void."—*Fonblanque.*

If idiocy or lunacy be proved to have existed at the time of the ceremony, it is *ipso facto* void, and precludes either party deriving any benefit therefrom, and the issue of such marriage would be illegal. Also a marriage *de facto*, solemnised under circumstances of clandestinity, inferring fraud and circumspection, where one of the parties has a weak mind (although not strictly an idiot), has been pronounced null and void, as in the case of the Earl and Countess of Portsmouth, and of Miss Bagster *v.* Newton.—*Chitty.*

Persons who are deaf and dumb may contract marriage, for they can give their consent by signs; but it is essential they should be competent in all other respects.—*Fonblanque.*

4th. It is of importance to ascertain whether the parties are what the law terms *habiles ad procreandos liberos*, in respect of corporeal ability; that is, whether they labour under any physical disqualification of propagating the species, for that being the ultimate use and intention of marriage, the contract cannot be good unless the parties are in a condition of performing it; except, indeed, where the incapacity arises from old age, in which case our Liturgy prescribes the omission of the prayer for procreation, where the woman is past the age of child-bearing. How the priest is to ascertain this point we leave for him to determine.—*Fonblanque.*

The question of whether they are "habiles ad procreandos liberos" being one of considerable magnitude, we shall defer the consideration of it till we take a medico-legal view of the law of divorce founded on impotency and sterility.

As generation is the legitimate aim of marriage, we will take a view of conception and gestation; for the ages of uterine life are a

subject of great importance to the medical jurist.

Generation is that function by which organised and living bodies produce and give birth to new individuals resembling themselves, and by which the species is perpetuated.

We shall not enter into the different theories of generation which have engaged the attention of philosophers from before the days of Aristotle down to our own; or yet of the different modes in which it takes place, whether by germs or buds, by division or section, or impregnation; and still less shall we tread the disputed ground of spontaneous generation.

The organs of generation in the male consist of two parts; first, those which elaborate and preserve the fecundating fluid, and secondly, those which accomplish the congress or coitus. The first consists, *in primo*, of two glandular bodies—the testes, which secrete or separate from the blood the fecundating fluid—the semen; 2ndly, the excretory canals of these glands, called the *vasa deferentia;* 3rdly, the vesiculæ seminales, which are continuations of the vasa deferentia, and may be considered as reservoirs where the fluid is deposited or stored up; 4thly, the two other canals, called the *ejaculatory ducts*, which convey the seminal fluid into the urethra. The second part is the *penis*, an organ of a spongy texture, from whence this fluid is projected, vi insigni, into the recipient organs of the female, who furnishes the germ, and the "locus in quo" fecundation takes place; she thus participates in the coitus, and contributes towards the conception; but, moreover, she furnishes an asylum to the fœtus, nourishes it, carries it a certain number of months, then excretes, or brings forth, and finally suckles the infant after its birth. Her organs of generation necessarily consist of many parts, namely, besides those which form the germ, and which accomplish the coitus or congress, those which are subservient to pregnancy, parturition, and lactation. They consist, 1st, of the ovaries, of which there is a pair, and are analogous to the testes of the male, and which furnish the ovula or germs; 2ndly, the Fallopian tubes, which are excretory canals, and which, by means of their fimbriated edges, seize hold of the ovaria, and receive the impregnated germs or ovula, and conduct them into the uterus; 3rdly, the uterus or womb, which receives the fecundated ovulum, preserves it during the period of gestation, supplies its wants during its development, and expels it at the period of parturition; 4thly, the mammæ, glandular organs which secrete from the blood the milk which is necessary during the period of suckling or lactation; and 5thly, the vagina, which receives the penis during the act of congress.

Conception, or fecundation, is evidently accomplished by means of the semen, and not by the fluid secreted by the prostate gland, or the glands of Cowper, which merely dilutes and attenuates the other. From the experiments of Spallanzani, it would appear that the most minute quantity is sufficient for impregnation. This distinguished philosopher examined some frogs whilst copulating in very clear water, and also out of water, and he observed, that the moment the female laid her eggs, the male emitted over them a transparent liquor, with which they were moistened and fecundated. In order to verify this, he made a dress of waxed taffeta for the male frog, and then observed that the eggs were no longer fecundated, and the waxed taffeta contained a sufficient quantity of this fluid to enable him to collect a part. He then dipped a camel's hair brush into it, and each egg which he touched became fecundated. Three grains of this prolific fluid were sufficient to impart the fecundating principle to a pound of water; and a single globule of this water, which could not contain more than 2,994,687, the 500th part of a grain, sufficed to fecundate an egg. Many experiments of this nature have been instituted, especially by the celebrated John Hunter, but to relate them would be somewhat foreign to our purpose, and occupy too much time.

From the late experiments of MM. Prevost and Dumes, it would appear that the seminal liquor is conducted by the Fallopian tubes to the ovaria, and consequently, that impregnation takes place from direct contact, and not from the emanation of the "aura seminalis," or by being taken up by absorbents, carried into the circulating mass, and from thence deposited on the ovula or germ.

In the year 1674, Ham and Leeuwenhock on the one part, and Hartsocker on the other, discovered in the semen masculinum a prodigious quantity of small bodies, in quick spontaneous motion; these bodies resembled animals, and were, in short, spermatic animalculæ. These animalculæ differ in form in different species of animals, but are always of the same form in the same species. They are never found in any other fluid except the semen; and are only to be met with during those ages of life that the individual is capable of reproducing its species, and are equally wanting in the last age as in the first, previous to puberty. Their number is so considerable, that in a single drop of the seminal fluid of a cock, they are said to amount to 50,000. The extreme smallness of these animalculæ explains the reason that Spallanzani was enabled to effect his artificial impregnations with the largely diluted semen. There can be no doubt but these animalcula contain the vivifying or fecundating principle. Prevost and Dumas conjecture that the impregnating animalcula forms the nervous system, and thus becomes the centre of organisation.

In whatever way impregnation takes place, one or more of the vesicles, or ova, contained in the ovaria, no sooner receive the vivifying impression, than they are loosened from their connexion, and grasped by the fimbriæ of the Fallopian tube; they are in due time conveyed into the uterus. The ovarium when examined exhibits a slightly lacerated appearance, as if

the germ had been detached from its vesicle by the rupture of its parietes, and the spot occupied by the germ assumes a yellowish colour, hence called "*corpus luteum.*" While these actions are proceeding, the uterus passes through several cotemporary changes; its blood-vessels are increased in size; the texture of its internal surface becomes softer and more spongy, and a white mucus is secreted, which, from the extreme delicacy of its arrangement, has been compared to the web of the spider; soon it assumes a more solid form, and adheres so as to form a lining to the whole cavity of the uterus, except at the orifices which lead to the Fallopian tubes and the os uteri. As Dr. William Hunter considered the inner lamina of the uterus was sent off, like the *exuviæ* of some animals, he accordingly called it the *decidua*, and from the manner of its passing over the ovum, the *decidua reflexa.*

Development of the Fœtus.—It is not exactly known at what period the embryo, or product of conception, descends into the uterus; according to some it requires a week, and according to others a fortnight to pass through the Fallopian tube. The appearances which it presents at different stages of its development, are not invariably the same, but are subject to be more or less modified by such causes as the size and vigour of the father, the age and constitution of the mother, the various emotions of the mind to which she may be subject during pregnancy, her state of health, the season of the year, the climate, and many other causes; but in the majority of cases we observe the following phenomena:—

About eight or ten days after conception there is not any thing found in the uterus, except a small vesicle filled with a transparent liquor. From a fortnight to three weeks the embryo is vermiform, oblong, bulging in the middle, obtuse at one extremity, and pointed towards the other, and has been compared to a tadpole, composed apparently of two masses: the *ovum* is about the size of a pigeon's egg, and the embryo about that of a common fly; it is now of a greyish colour, slightly opaque, about two or three lines in length, and weighs from two to three grains. No opening or protuberance is visible; there is no appearance either of the head, or of the members, nor yet of the heart, the brain, the blood-vessels, or any of the viscera.

At thirty days the embryo appears bent in the form of a crescent, and varies in length from three to seven lines, and weighs about nineteen grains. The head is now visible, and constitutes about half the body, and the spinal marrow is distinct throughout its entire length. The eyelids, exceedingly thin, cover the eyes, which now assume the form of two round black points; two round holes mark the place of the ears; there are no lips, but the mouth is distinct and marked by a transverse slit, the edges of which, not being drawn close together, have an opening until the third month. The superior members, which first begin to be developed, and afterwards the inferior, resemble papillæ or buds; the arm, the forearm, and the hands; the thighs, the legs, and the feet are not yet to be perceived. The clavicle, and each moiety of the inferior maxilla, already present a point of ossification. The heart may be recognised: it is not yet double, but appears formed of a single piece. The aorta and a portion of the pulmonary artery may be seen. The *decidua*, which existed previous to the arrival of the embryo into the cavity of the uterus, and which in the beginning was in a semi-fluid and semi-concrete state, is now more coherent but very soft, fleshy, pulpy, inorganic, and like a clot of colourless blood, thickly covered with filaments; it is *simple*, and covers the interior of the uterus and the exterior of the *ovum*. The *amnios* is very soft, and resembles the retina. The *chorion* appears under the form of a strong membrane, opaque, thick, and larger than the amnios, downy especially on its external surface, which has a shaggy villous coat, consisting of blood-vessels, both venous and arterial, and which ultimately form the *placenta*. The umbilical cord does not yet exist, but the *vesicula umbilicalis* is easily distinguished; it is either oval or spherical; the parietes are thin, containing a fluid at first clear and limpid, afterwards whitish and diminished in quantity; the younger the *embryo* the larger is this vesicle. The precise period of its formation is not known, but, as the umbilical cord grows longer, it remains attached between the membranes of the fœtus and the fœtal surface of the *placenta*, near the insertion of the cord.

At forty-five days the embryo has increased to sixteen or eighteen lines in length, and weighs from two to four drachms. The forearm and hand, the leg and foot, can now be discerned. The ossification of the epiapophyses of the first cervical vertebræ begins to take place. The cubitus, the radius, the tibia, the ribs, the scapula, the ilium, the occipital, and the two parts which constitute the frontal bone, present each a point, or centre, of ossification. The *thorax* is short and flattened; the abdomen large and protuberant. The meconium, of a whitish colour, is contained in the stomach. If the *cæcum* has not yet appeared, it is not long before it becomes apparent, and its appendage is, proportionally, never longer or larger than at this period. The liver extends, transversely, from the right to the left *hypochondrium*, and, vertically, from the *diaphragm* to the insertion of the umbilical cord. This is very thick, because it encloses a portion of the intestinal canal, the whole, or a part, of the *vesicula umbilicalis* and the omphalo-mesenteric vessels; it is rather longer than the fœtus, and presents no appearance of torsion; it is attached to the lower part of the abdomen by a very large and extensive base.

At two months the fœtus is from two inches to two and a half long; it weighs from an

ounce to an ounce and a half. The head is very large; the nose and ears are still closed. The arm and thigh, and also the fingers, appear about the seventh week. It is not until the end of the second month that the inferior extremities begin to be developed, and take the place of a rudimental tail. The lips begin to be formed. The skin, which hitherto had been substituted by a slimy filmy covering, and sufficiently transparent to allow the viscera, especially the blood-vessels, to be seen through it, is thin, easily torn, and destitute of any fibrous appearance, or texture. The branches of the pulmonary artery are seen, and increase in size with the fœtus. The *meconium* is still retained in the stomach. The *epiploon*, which is situated near the larger curvature of the stomach, commences to be seen, like a small flattened protuberance. The alveolar processes of the maxillary bones are apparent, each of which contains a gelatinous vesicle adhering to the bottom, enclosing the rudiment, or future germ of the tooth.

In an embryo of nearly an inch in length, and of about the period of nine weeks, the separate parts of the brain begin to be much more distinguishable; the spinal cord and cerebellum are visible, and the part which is afterwards converted into the *corpora quadrigemina* acquires a considerable bulk; the cerebrum at this time appears only under the form of a membrane. From this date the development of the brain proceeds with considerable rapidity. The most interesting circumstance in this part of the investigation, respects the order in which the great divisions of the nervous system come into existence. At the end of the second month the spinal cord and the two anterior prolongations, or peduncles of the brain, form, as it were, the basis to which the other parts are subsequently attached.

At three months, the fœtus is from five to six inches in length, and weighs from two ounces and a half to three ounces. The head is larger and heavier than all the rest of the body. The *pupilla* is closed by the *membrana pupillaris*, which continues until the seventh month, when it bursts in the middle, is drawn back, and effaced. The mouth is large and open; the nose is stopped up. The skin is still thin, colourless, and transparent, and without any appearance of the sebaceous covering. There are no nails, hair, or down. The bones of the ear are not yet ossified. In the middle of the ischium there is an oblong point ossified. There are no sinuses, either maxillary or frontal. The brain, hitherto fluid, now acquires a creamy consistence, but without any appearance of sinuosities or convolutions. The meconium, of a greyish white, is still retained in the stomach. The placenta is easy to be recognised, and covers more than half the ovum. The umbilical cord is inserted near the pubis; has become twisted; is nearly as long as the fœtus, and is of considerable thickness. The *vesicula umbilicalis* and omphalo-mesenteric vessels generally disappear during the third month.

At four months the fœtus is from six to seven inches long, and weighs from five to seven ounces. The volume of the head is very considerable in comparison to the rest of the body. The fontanelles are extensive, and the commissures of the cranium very wide. The skin is of a rosy hue, and, for the first time is now covered with a light down. The hair is very short, thin, white, and silvery; one scarcely perceives any trace of nails. The bones of the ear are nearly completely ossified. The brain is a white, soft, homogeneous mass, separated into two parts by an intervening groove. The meconium is now found in the beginning of the small intestines, and towards the end of this month there are some traces of the pylorus, but the valvulæ conniventes have not yet appeared. The kidneys are very voluminous, each one consisting of from fifteen to eighteen lobes. About this period the uterus has obtained a size larger than that of a Florence flask, and may be felt through the parietes or sides of the abdomen, in women who are not fat or deformed. About the third or fourth month, the germs of the teeth of the adult (that is of the second dentition) appear in the alveolæi, except those of the bicuspidæ, or first molares, which do not appear until six or twelve months after birth.

At five months, the fœtus is from nine to ten inches long, and weighs about a pound. The umbilical cord is not inserted so near the pubis as in the fourth month. The eyelids are agglutinated, and the pupil closed by the *membrana pupillaris*. The skin is smooth, delicate, and thin, without any appearance of fibres, or of a sebaceous covering; it is of a *purplish red*, especially the palms of the hands, the soles of the feet, the face, the lips, the ears, the mammæ, and in the folds of the axillæ, the groins, and the buttocks. The hair is thin, short, white, and silvery. The nails are merely a thin lamella, like the epidermis. The sternum has scarcely begun to be ossified, but the ossification of the bones of the ear is perfect, and they are almost as large as in the adult. At four months and a half the calcaneum begins to ossify, and on the summits of the gelatinous vesicles in the alveolæ are small lamellæ of bone. The lungs are very small. The heart, in proportion to the rest of the body, is large, and the auricles are, at least, equal in size to the ventricles. The meconium is now found in the small intestines. The testicles have now acquired a considerable size, and are situated beneath the peritoneum, a little under the kidneys, near the lumbar vertebræ; the same observation applies to the ovaries.

At six months, the entire length, from the crown of the head to the heels, is from eleven to twelve inches; the weight about two pounds. The middle of the body is at a point nearer to the umbilicus than in the preceding month. The relative size of the head, and

the opening of the fontanelles, is still very considerable. The skin now begins to assume a fibrous structure; it is delicate, thin, slightly grained, red, and even purplish, especially in the parts already indicated; there is a little down spread over the whole surface, but no appearance of the sebaceous covering. The nails are now formed, but soft, and somewhat reddish. The hair is short, white, and silvery, but shows a tendency to assume a distinct hue. The sternum has three or four points of ossification, generally proceeding lengthways and downwards. The brain is smoooth, soft, and without convolutions. The gall-bladder contains a small quantity of serous fluid, which is not bitter, and is nearly colourless. About this time the cortical substance of the kidneys is formed. The colon is uneven in its surface, but there is no appearance of the *valvulæ conniventes* in the intestines. A small quantity of meconium is found in the *cæcum*, and to some little distance in the colon.

At the seventh month, the fœtus is from thirteen to fourteen inches long, and weighs from three to four pounds. The half of the body is at a point still nearer the umbilicus and farther from the *sternum*. The eyelids are no longer agglutinated, and the *membrana pupillaris* begins to disappear. The skin, which was previously in many parts of a purplish colour, now assumes a rosy tint, and has become thick and fibrous; it also abounds with sebaceous follicles or glands, secreting a greasy substance, that is spread over the surface, and which does not appear at an earlier period. The nails do not yet reach the ends of the fingers. The hair loses its silvery appearance, and assumes a blond tint. The brain is of a yellowish white, but without any cineritious substance. The *valvulæ conniventes* begin to appear, but are easily effaced by stretching the intestine. The *meconium* occupies nearly the whole of the colon. The liver is large, tender, and of a deep red colour; the left lobe is nearly equal to the right. The gall-bladder contains a small quantity of serous fluid, which has now become slightly bitter. The testicles have descended nearer to the pelvis than during the sixth month.

At eight months, the fœtus is about fifteen or sixteen inches long, and weighs from four to five pounds. The middle of the body is about the third of an inch from the umbilicus. The fontanels are more open than at the ninth month. The *membrana pupillaris* is no longer found. The skin is now covered with the sebaceous matter, and is not so *rosy* as at the seventh month. The head and the abdomen are still large, in comparison to the rest of the body. The nails are pretty well formed, and the hair is longer and more abundant. The brain has slight furrows traced on it, but does not contain any cineritious substance; it has become more firm, and has a reddish tint in consequence of its increased vascularity. The length of the small intestines is nearly eight times the distance of the mouth from the anus, as with the adult. The meconium occupies the greater part of the large intestines. The testicles have descended into the abdominal ring. The gall-bladder contains a yellowish fluid, of a bitter taste.

At the ninth month, the length is about eighteen inches, the weight from six to seven pounds; but this varies: some infants are not more than fifteen or sixteen inches, whilst some are twenty-three; some do not weigh more than two or three pounds, and others, on the contrary, twelve or fourteen. The head is large, and measures about a fourth of the body, of an irregular ovoid shape. The bones of the cranium are moveable, yet touch each other with their membranous edges, and, during parturition, imbricate or overlap. The fontanelles are smaller. The circumvolutions on the surface of the brain are more numerous and strongly marked, and the cineritious substance is easily distinguished. The hair, sometimes an inch in length, is thicker and of a darker colour. The face is small, narrow, and covered with down. The abdomen is large, round, and projecting towards the umbilicus, the insertion of which is now rather more than half the length of the body, whilst, in a well-proportioned adult, the half of the body corresponds with the superior margin of the pubis. The pelvis is narrow, and but little developed. The testicles have passed through the abdominal ring, and are, perhaps, in the scrotum. The inferior members are proportionally shorter than the superior. The skin is of a pale rose colour, except at the flexure of the joints, and covered with a sebaceous substance, the *vernix caseosa cutis*, which is of a whitish colour. The body is covered with a short downy hair; and the nails, more firm, reach the extremities of the fingers.

The skeleton affords many important characters respecting the age of the fœtus; amongst them, we may remark the following observations of M. Beclard:—

"About two months after conception, the skeleton is rather more than four inches in length, and the spine two inches. At three months, the former is six inches, and the latter not quite three. At four months and a half, it is nine inches, and the spine four. At six months, twelve inches, and the spine five. At seven months and half, fifteen inches, and the spine rather more than six. At nine months, it is generally from sixteen to twenty inches—on an average, about eighteen—in length, and the spine about eight. Each vertebra, consisting originally of a section of a cylinder and a ring, furnished with several epiapophyses, is in general formed by three primitive points of ossification, the one anterior, which forms the body or solid part of the bone, and two lateral ones, which form the apophyses, and which, uniting with the former,

constitute the annular structure. Besides these, each vertebra is completed by several other points of ossification.

About the sixth month, two points of ossification are found in the second cervical vertebra. Towards the seventh month, the superior point, which answers to the odontoid process, is larger than the inferior, which relates to the body of the bone.

Reviews.

Observations on Functional Affections of the Spinal Cord and Ganglionic System of Nerves, in which their Identity with Sympathetic, Nervous, and Irritative Diseases is illustrated. By William Griffin, M.D., M.R.C.S.E., Physician to the Limerick County Infirmary and Lying-In Hospital, &c., &c., &c.; and by Daniel Griefin, M.R.C.S.L., and Surgeon to the Pallas Kenzy Dispensary. London: Burgess and Hill. pp. 247.

When we consider how indispensable the integrity of the spinal cord is to the comfort and well-being of the animal, how the due performance of every function in the body is wholly dependent upon its sanity; that the emotions of the heart, the passions of the mind, and the power to move and feel, are indebted to its bounteous supply of energy and of life; that, in fact, it embraces our whole being, is the source of pleasure and pain,—the giant's might, and the infant's sensitiveness. Such being its potency, we feel that scarcely any labour, however severe and long-continued, bestowed on the elucidation of its manifold diseases, can be more than it requires or deserves; that such an investigation, indeed, must call forth all the energies of thought, all the shrewdness of observation, all the curiosity of inquiry, and all the powers of cautious induction and of the most rigid and accurate reasoning, as well as the mental stores of the most profound anatomist, physiologist, and pathologist; we cannot, then, much wonder at the slow advancement of our substantial knowledge of the diseases of this organ. But to the consideration of the work before us.

The style of composition, arrangement of diseases, and general execution of the work, reflect great credit upon the authors; but, to be candid with them, we regret the very common omission of the temperament, aspect, and mode of life of the individuals under observation, which would no doubt have afforded some insight into the nature of their complaints, whether irritative or inflammatory. Some of the cases might, we think, be more justly regarded as instances of primary inflammation inducing neuralgic pains, which we know are not uncommon, than of irritation of the spinal cord; and we are disposed to consider the cases in which the cure or relief was effected by "profuse ptyalism," more those of rheumatic neuralgia or genuine inflammation, than of mere "irritation," because we have frequently observed the ill effects of such a measure in the subjects of *undoubted irritation*.

The diagnosis of cerebral, spinal, and ganglionic diseases is stated to be—1st. Of cerebral, "from the history of the case and the intensity of particular symptoms." 2nd. "If there are symptoms of which there is much doubt, or which evidently do not belong to the brain, we can observe how far they correspond with the usual or known symptoms of spinal disorder, organic or functional." And, thirdly, "if there be some symptoms found bearing no analogy either to the one or the other, the deduction seems clear, that they depend on some disordered or diseased state of the ganglionic system."—P. 4.

Every medical man in moderate practice must have frequently noticed with surprise the exact similitude of some nervous headachs to genuine phrenitis; the tightness over the forehead, throbbing, heat, pains darting through the brain, tinnitus aurium, intolerance of light and sound, injected conjunctiva, sickness, and even delirium, which would almost suffice to convince us that inflammation had marked it for its own, but the pulse and tongue, and our knowledge of the patient, quickly undeceive us; depletion produces no amendment, but purging, counter-irritation, and tonics usually effect a rapid and perfect cure. These cases, as well as "chronic headach, browach, aching of the cheeks and face, pains in the breast, side, or sternum, or at the shoulder, and down either arm" are attributed to irritation of the cervical portion of the cord, pressure on the corresponding vertebræ exciting the pain complained of. "Various affections of the senses, loss of sight, hemera-

lopia, deafness, noises in the ears, vertigo, spectra or visions, delirium, and insensibility, are severally effects of irritation at the cervical portion of the cord, and are sometimes accompanied by headach of a very intense nature. But they are still more frequently met with where the spinal affection is general. Sickness and vomiting, inordinate hunger and thirst, loss of appetite, and pain or tenderness of stomach, which are generally, both in practice and in the schools, attributed to some diseased or disordered state of the organ itself, are very frequently dependant on disturbance at the origin of the par vagum, and always in those instances indicated by tenderness at the cervical portion of the spine."—Page 46. Now, by "disturbance" we presume is to be understood irritation, because "it is *always* indicated by *tenderness* at the cervical spine;" well, then, from the very same cause, irritation at the origin of the par vagum will produce the most diametrically opposite results, nausea and loss of appetite, and the most voracious hunger; this is wonderful! but we really become seriously alarmed at the bare idea of having a par vagum in our beloved body, when we were told, in page 86, that "irritation at the *trunk* of the respiratory nerves may induce tubercular inflammation as readily as when acting on their minute fibrillæ." Now, we take "respiratory nerves" to mean nothing more than the par vagum, by this token, that it is the only nerve which is permitted to poke its abominable fibrillæ into the dwelling places of these hateful tubercles, unless, indeed, we except the ganglionic nerve, whose comparative innocence excites our loving admiration. But the fearful climax is at hand; "that spasmodic croup is, in most instances, dependent either on irritation at the origin of the 8th pair, or at some part of the fourth ventricle, we need scarcely offer further proof than the frequency of its occurrence as a symptom of spinal irritation in adults." So that, *supposing* the origin of *our* par vagum to be very wroth, to have its very mainsprings befouled with "irritation,"—Heaven forefend there being aught but *supposition* in the case,—if we escape the death by vomiting and starvation, or sheer gluttony and drunkenness, we are condemned to die ingloriously, "barking" like a dog, consuming by inches from tubercles, or strangled like the vilest malefactor. We are convinced of nothing more completely than of the existence of croup as a purely spasmodic disease; for we have known children, while at school, or during play, attacked with its most violent symptoms without a moment's warning, and have invariably seen it yield to counter-irritation, antispasmodics, and anodynes.

Angina pectoris has long puzzled the most expert of our pathological theorists; it has been ascribed to dyspepsia, diseased liver, ossification of the coronary arteries, &c., because it has co-existed with them, and to neuralgia, because there was nothing more tangible to lay hold of, and, finally, to spinal irritation; it is probable that each of these, under certain circumstances, is capable of producing angina pectoris, and perhaps it may be found without any one of them. Epilepsy has also posed many a wise head; irritation of the bowels, irritation of the cerebrum, irritation of the cerebellum, and even irritation of the spinal cord, have each been assigned as causes. We believe any one of them will produce the disease, when the predisposition exists.

We pass over, for want of space, dorsal, lumbar, and general irritation of the chord, merely remarking, with respect to the latter, the very singular effect of pressure on the spine, as instanced in cases XVI., XX., XCI., XCII., &c., which occasioned insensibility, convulsions, and "a most horrible sensation."

The authors, in a foot note, intimate their doubts respecting the possibility of the portio dura ever being the subject of neuralgia, as it is a motor nerve. Now, by analogy, that might be almost demonstrated; thus, the phrenic, which performs very similar functions, is a respiratory and motor nerve; we know of *a certainty* that *it* transmits and experiences pain; why not also the portio dura? Its neuralgia is said to be attended with less excruciating pain and much more twitching.

The subject of "Simulated Inflammation" is one of great practical interest. Hysteria does, no doubt, occasionally put on the resemblance of local inflammation; but in our cases in which such a cunning deception has been practised upon us, we have *invariably* found bleeding increase every unpromising symptom; nevertheless, though thus solely misled in our early career, we now think there is little difficulty in deciding upon the real nature of such

complaints. The diagnosis of simulated and real inflammation appears committed, by Dr. and Mr. Griffin, to the sole circumstance "of spinal tenderness almost always attending the simulated disease, and seldom, if ever, the true inflammation." Now, this we cannot confide in *solely*, and will therefore continue to seek, in addition, other helps to extricate us out of such a serious dilemma. "The transmission of irritation from parts in a state of high inflammation, is, we believe, rare; while its transmission from a part in a state of irritation, is of daily occurrence. Inflammation of the jaw rarely produces constitutional symptoms, while the *irritation* of dentition causes vomiting, purging, croup, convulsions, &c." "The intensity of action and sensation in an inflamed part engages the nervous influence too powerfully to admit of distant minor effects; while the peculiar and less engrossing disturbance, the mode of sensation, if it be such, which constitutes irritation, is merely sufficient to act as an excitant to the central nervous masses." Now, this "mode of sensation" we conceive to be not less "a mode of sensation" in those most "engaging" and "engrossing" affections called phrenitis, (especially of the base), hepatitis, gonorrhœa, hysteritis, and mumps, which severally produce vomiting, pains at the shoulder and throat, hernia humoralis, pain on passing the urine, and, in the case of mumps, inflammation of the mammæ in woman, and the testes in man. Besides, when the disease is not so "powerful" and all "engrossing" as to preclude the admission of "distant minor effects," we can imagine the probability of there being some necessarily antecedent state to that of the mere irritation and *now* "engrossing" presence of worms in the bowels, and teeth in the jaws of children, or of a bougie in the urethra of a man, inasmuch as each one is frequently known to be present when no such "distant minor effects" are produced; we therefore regard these minor effects as the consequence of a previous nervous and highly excitable state of the system, and the presence of an exciting cause.

The inferences and concluding observations are well worthy of attention. The treatment does not contain much that is new; the administration of a tablespoonful of sulphate of alumina, and of half a wine-glassful of vinegar, are said to have relieved gastrodynia and pyrosis. We doubt the propriety of a "mercurial course" in the subjects of irritative diseases, as we have witnessed its baneful effects, and because they "are almost invariably persons possessing an extraordinary mobility of the nervous system," and in such habits mercury is very difficult of control.

In conclusion, allow us to observe that we have chided "more in sorrow than in anger," and have selected the most objectionable parts of the work rather than the good; because not having room for the insertion of both good and bad, we thought that though our readers would demand a reason for our disapproval, they would admit our simple word for the good things which the work contains; and we assure them there is much, very much to commend. The classification of the irritative diseases, the tact with which these diseases are traced to their proper nervous origin, and the vast number of cases they have collected, do the authors infinite credit, and prove them to be men possessed of the most patient observation and strong reasoning powers, as well as profound anatomists and physiologists, and skilful practitioners.

Reflections on the Nature of Inflammation, and its alleged Consequences. By David Badham, M.D., one of Dr. Radcliffe's Fellows, from the University of Oxford, and Fellow of the Royal College of Physicians. London: 8vo. pp. 67. Khule.

Part the First, of a *Critical Inquiry into the various Opinions advanced on the Physiology of the Blood-Vessels, Absorbents, and Process of Absorption in the Adult and Fœtus; likewise on the Blood, Lymph, and Chyle, the Changes which these undergo in separate Parts of the Body, and the different Appearances which each exhibits in Health and Disease.* By Richard Vines, Demonstrator of Anatomy at the Royal Veterinary College. 8vo. pp. 79. Longman.

We have associated these two essays together, not because they treat on the same subjects, but on account of the proximity of their physiological references. It does not derogate from the character of a physician to be placed in contact with a scientific veterinary surgeon. One treats the diseases of men; the

other of animals that minister to his comforts and enjoyments: each is equally useful; and Science, however numerous and celebrated her votaries, has but one object in view,—the good of the whole.

We shall discuss the topics in the order we have placed them.

Dr. Badham commences his "Reflections" by decrying all systems which have preceded his. He is a casuist in the extreme. He will remember the anecdote concerning the philosopher, who, when asked—"What is motion?" walked across the room, and replied, "This is motion." Has Dr. Badham answered the question more satisfactorily of—What is inflammation? We answer not. He has adduced a few opinions on the causes of inflammation from the lectures of Mr. Lawrence, and has taken these as the dicta of experience and concurrent opinion. Mr. Lawrence is a clever man; no one disputes the position. Dr. Badham is determinately at variance with the opinions of modern physiologists. He says, very philosophically, at p. 15, —"Now we do know something of latent *heat* in unorganised bodies; but inflammation is not *heat*, it is a *vital action*, and of a vital action of which we have had no evidence during life;" and his conclusions on that subject are as ridiculous as his descriptions. We beg to tell him that assertion is not proof; this he might, we presume, have learned at *Oxford*.

The Doctor tells us gravely and with confidence, that we do know something of latent heat. This we do not deny; but when he informs us that "inflammation is not heat," but that it is a vital action, &c., we laugh at his inference. Perhaps the sound principles of physiology were never more perverted than in the present essay. We have assertion after assertion, doubt after doubt; nothing is believed, and we may with justice affirm, nothing is disproved, nor anything confirmed.

Dr. Badham may be an ingenious man, may be able to overturn all the prevailing theories of his day, but he is, in our opinion, devoid of three essential requisites, a knowledge of his subject, an acquaintance with the already promulgated opinions, recognised or objectionable, and a happy manner of embodying his objections.

Throughout the tenor of his essay we meet with no development of any grand leading principle of physiology, none which can direct us to the true path,—darkness envelops us,—or an "ignus fatuus" directs us astray.

Melodious language may please the ear, music to many is angelic delight, but casuistry is to the Baconian philosopher a source of annoyance. In religion, to the philosopher, implicit credence to precept is not objectionable, but the results of inductive philosophy are assuredly to be expected. The inflammation is not assuredly understood, its laws are immutable, but its manifestations are modified by innumerable circumstances. Dr. Badham has not illuminated us on the subject. He has left it where he found it, a chaos of facts, opinions, and hypotheses, impracticable in their application.

Dr. Badham endeavours to establish, what many have attempted before him, that inflammation is but a natural action diminished in degree, but not "*in mode.*" Hence the Doctor met with difficulties he could not surmount. He does not explain why *new products* are produced in inflammatory affection, only the primary chemical elements of which exist in the blood. If inflammation were a mere reduced action of the part in which it may exist, the only change we should, *à priori*, expect, would be a reduction of the natural sensibility of the part, a greater pallor of surface, a diminished quantity of secretion, &c.

This mode of accounting for the various disorganisations of parts presents nothing which is not contained in the best text books. We have not space to make further allusions to this pamphlet; few, except the author's friends, will be interested with its contents.

The title of Mr. Vine's "Inquiry" will present to our readers the multifarious and important subjects on which it treats. The author displays acuteness of research and close observation. His Inquiry must and will be read by every one interested in physiological studies. We trust that he is prosecuting the enquiries further. Each topic, which he has undertaken to develop, contains a mine of much value within itself. We know little more than the chemical composition of the various fluids; of the laws which govern and regulate them we are ignorant. We do not know the nature of those materials of which the vessels are constructed, and our acquaintance with their

physiology is exceedingly imperfect. The agents of absorption, the mechanism of the secreting and excreting apparatus are not known, therefore every hypothesis, based on such data, must be liable to error. Structure must first be known before function can be comprehended or explained. The respective authors of these Treatises will so far concede to this proposition.

Esquisse des Progrès Reéls de la Mêdecine depuis 1800. Par. N. A. Pingeon, D. M. P., Secrétaire de l'Académie des Sciences, Arts, et Belles Lettres, de Dijon, &c. 1 vol. 8vo. pp. 170

Sketch of the Real Progress made in Medicine since the year 1800. By N. A. Pingeon, D.M.P., Secretary to the Academy of Sciences, Arts, and Belles Lettres, of Dijon, &c.

Our author has chosen a difficult and laborious task, but he has acquitted himself honourably. There is but one source of regret; the work embraces, with but few exceptions, French medicine only. Surely England, Italy, Germany, and America, have within the last thirty years contributed somewhat to the advancement of the medical sciences, and if so, why should they be neglected in a book professing to give a sketch of the real progress made in medicine. The title would stand better thus,—a sketch of the progress in science made by the French physicians, since 1800.

The writer of this production has displayed considerable knowledge of medical literature. There is not a single book of any note, the principal ideas in which he does not republish, and the essays which deserve it, and yet are not of sufficient importance to require an analysis, are arranged in due order, and in such a manner that the reader can at once ascertain where further particulars may be obtained.

M. Pingeon commences with a general view of the medical schools of the eighteenth century, which were replaced by that of Pinel, and by others. Then, in a special section, he examines the progress made in the study of the diseases of the encephalon and of the spinal marrow, of the larynx, the lungs, the heart, and great vessels, the digestive organs, the genito-urinary organs, dropsies, diseases of the skin, and, finally, the special diseases. A second is devoted to surgery and midwifery, and a third to therapeutics and chemistry.

Were the book complete, that is to say, did it contain a notice of the English and other works, it would be highly valuable. As it is, it merits great praise.

Reports of Societies.

WESTMINSTER MEDICAL SOCIETY.

Saturday, October 25th, 1834.

G. T. Burnett, Esq., in the Chair.

In lieu of the expected essay from Dr. Epps, a question of considerable importance to the Society was agitated. It appears that, instead of four presidents, as heretofore, the Committee had determined there should be only two, with two vice-presidents. The reasons for the change were not very apparent, and it was resisted by the members on the ground that the presidents and committee were appointed to carry the laws into effect, and not to abrogate or alter any of them. It is expressly stated in the bye-laws, that there shall not be any change made in them without the approbation of the members, and as this was not obtained in the present instance, the new law was considered to be illegal, and was therefore opposed. The President determined, however, to proceed, and an election took place, Dr. Addison being chosen President, and Dr. James Johnson and Mr. Richard Quain, Vice-Presidents. A protest was made against the proceedings, and intimation given that a special meeting would be summoned with the view of rescinding the obnoxious resolution of the Committee, and even of calling upon that body to give an account of their stewardship.

We believe that this is the only society in London where the Committee or Council have presumed to make laws and act upon them, without first submitting them to the general body. The members of the Westminster Medical Society are perfectly right in their opposition; they ought not to let the question drop; it would form a very injurious precedent.

LONDON MEDICAL SOCIETY.

Saturday, October 25th, 1834.

— Bryant, Esq., Vice-President, in the Chair.

The case of a lady was narrated by Mr. Evans, to whom he had been called early in the year. When he saw her, she supposed herself pregnant, that she had quickened, and had felt the motions of the child. He was summoned in consequence of the liquor amnii draining away. He sent her to bed, made an examination, and found the os uteri rigid. The next day she was walking about as usual. After a time, the enlargement of the abdomen began to diminish, and the patient considered that both herself and the doctor were deceived. A tumour, however, formed above the umbilicus, and gave a sensation of fluctuation, as if it had been an abscess. This was opened by Mr. Callaway, giving exit to fœtid gas and a little purulent matter. The patient gradually sunk, and expired in the month of September last, exhausted by diarrhœa, and the long continuance of her complaint. On examination after death, a fœtus about the seventh month, was found lying across the abdomen, below the transverse arch of the colon, imbedded in purulent matter. There were scarcely any traces of the uterus, with the exception of the os tincæ, and a small ragged portion of the body of the womb. The vagina communicated with the cavity of the peritoneum. The ovaries and Fallopian tubes were not examined.

CASES ILLUSTRATIVE OF THE USE OF THE ERGOT OF RYE AS AN EMMENAGOGUE.

BY M. ROLLET.

The first case occurred in a young woman, 18 years of age, in whom menstruation had occurred two months before. A sudden increase in bulk had taken place; her limbs were emaciated, and her chest large and flat, though her breasts were but slightly developed. During the last eight days, she had experienced great pain in all her limbs, and she had some fever, which was augmented at 1 o'clock and 6 o'clock, P. M. The tongue was red at its edges; there was pain in the epigastric region; no appetite, and the pulse was hard and quick at the period of the exacerbations. Fifteen leeches were applied to the epigastrium, and low diet was enjoined. Four days after the commencement of the treatment, the febrile symptoms were augmented; the steam of hot water was made use of, some leeches applied to the vulva, and mustard poultices to the feet and thighs, but without the menstrual evacuation being excited. Remembering that the employment of the ergot of rye had been recommended in ammenorrhœa, I determined to employ it in the case in question. Having infused, therefore, two drachms in a pint of water for an hour, I ordered a small coffee-cup full to be taken every half-hour. Ten minutes after the first dose the pulse diminished considerably in quickness, which proves the assertion of the slowness of its operation to be erroneous, both with regard to the uterus, and the nervous system generally. I then diminished the dose to ℥ ij. every half-hour, and, afterwards, only every hour. The administration of this was commenced at 9, A. M.; the usual febrile paroxysms did not occur, and in the evening the pulse was but 50 beats in a minute.

The medicine was continued, in gradually diminished doses, during eight days. The fever disappeared, the general health improved, and the stomach gradually recovered its healthy condition. On the fifteenth day, the menses appeared. Since then her general health and appearance have become far better than before the affection. During four months she has only menstruated twice, but did not suffer the slightest inconvenience at the intervening periods.

The second case was that of a young woman, æt. 22 years, of a sanguine temperament. During the last five or six years which had elapsed since she left the country, her menstruation had been irregular. At each period she had been attacked with headach, congestive symptoms, colic, and vomiting. Sometimes even two or three months would elapse without the appearance of any discharge, which caused much uneasiness. Foot-baths with mustard were of no avail, and she could not be persuaded to expose the parts to the steam of hot water, to apply mustard poultices to the thighs, or leeches to the vulva. Temporary relief alone

was obtained by twice bleeding her, and it was in vain that I endeavoured to persuade her to make use of any of the above mentioned means.

Last September an attack of the usual symptoms took place, only in a more intense degree. I now determined on a trial of the ergot of rye, and ordered a small coffee-cup full, of an infusion of the strength of a drachm to a pint, hourly. The next morning the menses appeared, and all the unpleasant symptoms had vanished.

This young woman, finding herself indisposed the following month, prepared the infusion from some ergot she had in her possession, without consulting any one. A similar result was obtained, but it was not till some days afterwards that she acknowledged her successful imprudence.

The third case was this,—Madlle. de B., æt. 23 years, of a nervous temperament, having been greatly alarmed when the menses had been on her but two days, they immediately ceased. Uneasiness, giddiness, and vertigo supervened. Pediluvia, with mustard and hot fumigations, failed in renewing the menstrual discharge. At the end of eight days I was called in, when I prescribed, as in the last case, the infusion of the ergot. The medicine was continued two days; after the first, the headach ceased, and on the eighth the catamenia reappeared. Since then her health has been re-established, and the menses have twice appeared at the regular period.

It is with the hope of inducing other members of the profession to make trial of this medicine, that these cases are published. Could we count on similar success in defined cases of amnenorrhœa, therapeutic medicine would have reason to glory in the acquisition of such an agent.

AN ABSTRACT OF THE BYE-LAWS OF THE GERMAN ASSOCIATION OF PHYSICIANS AND NATURALISTS,

Established, in the Year 1822, *at Leipsic.*

Several German naturalists and physicians having met at Leipsic on the 18th September, 1822, founded a society, to which they gave the name of "The Association of German Physicians and Naturalists.

This Association was established with the view that the naturalists and physicians of Germany might meet together occasionally, and become personally acquainted with each other.

Authors on natural history or medicine are eligible as members, but the composition of a thesis does not constitute a right.

Candidates must be recommended by members according to a particular form, and on admission they will receive a diploma. Visitors are admitted in the usual form, but they are required to be well acquainted with medicine or natural history. Individuals who devote their time to the study of natural history as a profession are eligible as members.

All questions submitted to the Association will be decided by a majority.

The meetings of the Society are to be held annually, commencing on the 18th September, and continuing several days. The public will receive free admission.

The Society will hold its meetings at different towns, the place to be decided on at the previous session. The president and secretary are the officers of the Society, and must be persons residing upon the spot. They are to conduct the business of the Institution in the interval between the sessions. The president is entitled to name the place and hour of meeting; he will superintend the proceedings, and every speaker is desired to address the chair. The secretary will keep the register and accounts, and also attend to the correspondence. All documents are to be signed in the name of the Society. If either of the officers should die or resign, their place is to be filled up by election from among the members. There are no fees, the expenses of the meeting being defrayed by the contributions of the members present. The communications submitted at the meetings are afterwards returned to the authors.

No alterations are to be made in these laws for the first five years.

(Signed, in the name of the Society)

Dr. Friedrich Schvagrichen,
President, Professor of Natural History.

Dr. Gustav. Kunze,
Secretary, Extraordinary Prof. of Medicine.

THE
London Medical and Surgical Journal.
Saturday, November 1, 1834.

PARLIAMENTARY EVIDENCE.

We now commence the fulfilment of the pledge, made a short time ago, that, in the absence of more interesting subjects, we should present our readers with a concise digest of the medical evidence elicited by Parliament. Medical Reform has been resounding in our ears for a series of years; one set of men have denounced all that is as objectionable, injurious to the profession and the public; another class claiming the rights and privileges preserved by individuals, or corporations, as sacred and inviolable, both running equally into extremes. The evidence before us will show to the world the reasons for such a wide diversity of opinion; it shall be our duty to oppose the sentiments of the different witnesses; to place the arguments of the individuals in such a position, that many of our country readers, who were deprived of hearing the evidence, may thus have an opportunity of ascertaining the feelings of the profession generally. Only the evidence of the Physicians is printed; these we shall divide into Fellows, Licentiates, and Graduates. We shall see how each body defends its own system, and in what respects they may differ. First of the College of Physicians.

Dr. Francis Hawkins, Registrar of the College, was first examined. The College was founded 1518; its proceedings are recorded in its annals, from 1555 to the present time. Only a few extracts from the by-laws have been published, and which can be obtained by the Fellows and Licentiates, but they are all open to inspection. In 1765, the statutes were revised, and the old ones repealed, which were printed for the Fellows only. In 1772, a by-law was penned, giving to the President the power of electing two Licentiates annually to the Fellowship, and a statute giving a privilege to the Fellows of electing a Licentiate of thirty-six years of age, and of seven years' standing in the profession,—not one Licentiate has ever been elected. Monstrous! Many appear to have offered, but none were chosen. Dr. Wells, Dr. Sims, and Dr. Stanger are the only names mentioned.

Sir Henry Halford, President of the Royal College of Physicans, with the caution of an accomplished courtier, answers mildly, but frequently evades; there is not that straightforwardness of reply which characterise an independent mind. When asked if he was aware of the application of Dr. Wells, a Licentiate, for the admission, "I am," was the laconic reply. "Are you aware why he was not elected?" "No notice of intention to propose him had been given to the President, which was a rule, and as an act of courtesy should have been done." Dr. Wells asserts, that he was proposed, but not admitted. "Presuming this fact to be correct, would you still maintain that no notice was given?" "I could not, if all that be true." Sir Henry admits that Dr. Wells is a man of honour and credit, still, after the Doctor's disappointment, he implies that the Doctor might have made a false statement. The learned courtier might himself understand the art of misstatement. He thinks "that a Licentiate has nothing to complain of if he is not admitted a Fellow; he has a great cause to complain, if he is qualified for his examination as a Licentiate, and is refused an examination in order to his being licensed: that is a hardship, but the other is not." We are of opinion, that

the refusal to admit a candidate to an examination, if properly qualified, would not only be a "hardship," but a gross violation of the laws of society, such an act as every honourable man would blush at. If the posts of honour and titles were awarded to meritorious men, science in this country would be more on the advance than at present; the highest office in the College of Physicians would not be filled year after year by the present President, but be awarded annually to men of sterling merit. Sir Henry could not see any man of extraordinary pre-eminence for election last year, but this year Dr. Wilson Philip had just arisen into eminence, he was then elected. It was thought not desirable to elect him, on account of his being engaged in a dispute on a scientific subject with an eminent person (Dr. Prout). The Graduates of Oxford and Cambridge, on account of their superior preliminary education, Sir Henry supposes are more likely to become accomplished physicians; he thinks the study of physic, at these two Universities, is undervalued,—however students go elsewhere for it. The Fellows have no advantages over the Licentiates, with reference to practice. Graduates from foreign Universities are to remain seven years before they are eligible for election to the Fellowship, in consequence of their not having undergone "the moral and intellectual discipline they undergo at the English Universities." If proofs could be adduced that Graduates of foreign Universities had passed a similar moral and intellectual discipline, Sir Henry "would admit them in the same manner." From 1771 to the present period, 147 Graduates of Oxford and Cambridge have been admitted, 19 Licentiates on the recommendation of the President, and four proposed by him rejected. The reasons which have prevented the admission of a great number of Licentiates to the Fellowship, he attributes to the acrimony between the Fellows and Licentiates, and the violence with which they pursued their claims, since the Court of King's Bench had determined the right:—"We have been more liberal lately in their admission than formerly." The cause of this liberality is not developed. We will answer the question. They were compelled to do it; the exposures of their monopolies were daily being made by the press and in private society, so that, for fear of very shame, they have been "*more liberal lately.*" To the question—Do not you think it would be a better system of election, if the recommendation was to come from the Fellows generally, instead of the President?—"I do not think it would be a bit better." A Licentiate is as capable of being a physician to the royal family, to a hospital, or a teacher of physic, as a Fellow. Graduates of Oxford or Cambridge are not required to go through any regular curriculum of study; examinations suffice to prove that the candidate has studied medicine properly. There are three examinations, each about two hours in length; the Examinors are the President and Censors. The extra-Licentiate, or one who is to practice beyond seven miles of London, is examined only once; it usually occupies one hour. They are examined on all branches of medicine, except the manual parts of midwifery and surgery. As Sir Henry Halford stands at the head of the College of Physicians, and must therefore have great control over its machinery, we have entered more in detail on the nature of his opinions than we shall do on those of other witnesses. Our comments on his evidence shall appear next week.

RULES AND REGULATIONS OF THE ROYAL COLLEGE OF SURGEONS.

Royal College of Surgeons, Oct. 28, 1834.

It is expected by the Council of the College, that the following Regulation be attended to by all students coming to London for any part of their education, and with the ulterior view of becoming candidates for the diploma of the College.

REGULATION.

Every student, on the commencement of his education in London, is desired to present himself at the College, to register his name, together with the documents of his previous studies; at which time he will be required to produce evidence, satisfactory to the Court of Examiners, of having entered to those studies which are necessary for the completion of his education; and credit will be given for attendance on hospital practice or lectures in London, only from the date of such registry.

In order to verify the certificates presented by candidates for the diploma of the College—

The teachers of all schools, whose certificates are recognised by the College, are requested to transmit to the Secretary, on the 1st of November, the 1st of February, the 1st of May, and the 1st of August, in each year, or as soon after as possible (according to the order and duration of their respective lectures), a quarterly return of all students attending their several classes, noting the date of entry, and the periods for which they may have entered, together with any remarks as to attendance, absence, &c., according to the form enclosed herewith, and which will be furnished by the College on application to the Secretary.

In order to verify the certificates presented by candidates for the diploma of the College—

The surgeons of all recognised hospitals are requested to transmit to the Secretary, on the 1st of November, the 1st of February, the 1st of May, and the 1st of August, in each year, or as soon as possible, a quarterly return of the students attending the same, noting the dates of entry, and the periods for which they may have entered, together with any remarks as to attendance, absence, &c., according to the form herewith enclosed, and which will be furnished by the College on application to the Secretary.

EDMUND BELFOUR, *Sec.*

Pupils are to register at the College their name, residence, county, age, with whom they previously studied, where, in what county, dates of commencement and termination, name of the hospital, and the lectures now entered to.

Lecturers are to transmit to the College a quarterly return of the pupils attending their lectures, signifying the name, date of entry, and for what period.

A similar return is to be made by each recognised hospital.

PERIODICAL HEADACH TERMINATING BY EFFUSION OF SERUM INTO THE VENTRICLES OF THE BRAIN.—TUMOUR IN THE CEREBELLUM.

BY JOSIAH ALLSOP, ESQ., BIRMINGHAM.

JAMES SCOTT, æt. 6, began to suffer, in September, 1829, from fits of severe sick headach, recurring at first about once a fortnight, then increasing in frequency to one or two a week. For four months he continued to enjoy good health in the intervals. He was stout, fleshy, growing rapidly, good appetite, bowels regular and dejections natural, until a very short time previous to death.

The evening before the paroxysm he was observed to sigh, and appeared a little restless and languid. The attack usually came on early in the morning, awaking him with severe bursting headach and nausea, increasing for some minutes to excruciating agony, when he called out for his head to be compressed, and vomited. The pupils were large, not obedient to light, but contracting and dilating irregularly, as much in the light as shade. The pulse slow, weak, and irregular. The pain commencing in the forehead, over the left eye, extending from thence to the occiput. The head was occasionally drawn back during the severe pains. The duration of the paroxysm, consisting of these aggravations of pain and sickness, with remissions of varying duration, was five to twelve hours, terminating in a long and calm sleep, from which he awoke

lively and free from complaint; the next day he appeared in full health and spirits.

I may here mention, that in this case leeching during every paroxysm, purging, and low diet, were used early in the disease, without having the least influence on the violence or recurrence of the paroxysms. Afterwards small doses of the sulphate of quinine, with the shower-bath, seemed triflingly to moderate their violence. When the inflammatory symptoms appeared, he had leeches and blistering to the neck several times. But the only means which relieved his sufferings in any appreciable degree was an active purgative taken on the commencement of the fit, and the cold affusion during the aggravation of pains.

In February, 1830, first appeared symptoms of a more permanent disorder of the circulation in the head. He began to complain of slight intolerance of light; the pupils dilating, and contracting imperfectly; slight wandering pains in various parts of the extremities and trunk, with a slight tenderness at the lower cervical vertebræ. These pains in a few days subsided; but the dilatation of the pupil increased with indistinct vision, until he could but just distinguish light. He was now more than a month free from the paroxysms of headach; had tingling of skin; slight dragging of the left side; walking with a jerking motion; head drawn to one side.

March 13th. To the previous symptoms were added languor and debility, with a return of the flying pains.

14th. Another and last fit of severe headach occurred, leaving the flying pains more severe. His pulse now became increased in frequency, being 104. The spine was tender on pressure throughout the whole length. The languor increased to inability to hold himself erect, and at length to imperfect paralysis of both extremities, greatest on the right side. The bowels became obstinately confined, and the urine at length retained, requiring the use of the catheter.

From the 20th to the 22nd of March he had an attack of fever, with intolerance of light and sound; watchfulness, increase of pain and general tenderness of skin commencing; the frequency of the pulse remained as before. During this heat of skin and increased determination to the head, the eyes, before dilated, now contracted, but again dilated on the cessation of these symptoms, and he remained afterwards incapable of distinguishing light at all. The pulse now rose in frequency to 124; he ceased to complain of pain except when touched or moved.

From the 1st of April he slept much, but was easily roused; made no complaints unless when moved. A puriform secretion came from the eyes; foul parched tongue; difficulty of swallowing; respiration became irregular, ceasing for a time, then beginning again with inspirations of unequal length. He died on the 3rd of April, not of suffocation, but apparently of exhaustion, remaining perfectly sensible, and retaining his intellectual faculties entire to within a few minutes of death.

Examination of the body six hours after death.—Not emaciated. The bones of the head were not separated at the sutures. The *dura mater* was transparent. The veins on the surface of the brain were turgid and minutely injected; no bloody points observed in the white substance of the brain. The grey parts not firmer than usual *; the white extremely dense, especially in the cerebral parts, but of a full white colour. The lateral ventricles, and the parts communicating with them, were greatly distended with transparent serous fluid, and did not collapse in the least when it was removed. The *foramen* of Monro, with smooth round edges, would admit an almond. The plates of the *septum lucidum* were firm, with a ventricle containing fluid between them. The fourth ventricle was distended with fluid. The *thalami* were separated from each other. The *infundibulum*, like a true funnel, contained fluid. The lining membrane of the third ventricle was opaque and thickened, so that it could easily be raised. We were unable to measure the quantity of fluid which escaped from the ventricles; but it certainly could not be less than eight ounces.

On the base of the brain, the optic nerves were soft, yellow, and diminished in size. All the natural depressions filled up with a trans-

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* From the pure whiteness of the colour, I am inclined to attribute much of this hardness to compression. The grey parts were not harder than usual; but in the *corpora striata* they could be scraped away from the white.

parent jelly-like yellowish deposit; between the *pia mater* and opaque arachnoid following the course of the vessels, into the different fissures.

The veins of the *cerebellum* were injected; but no disease found in its substance, except at the posterior and inferior point of each lobe, where a small portion was softened and semi-transparent. In this part of the left lobe, which was most affected, was felt a hard substance, which cut like scirrhus, opaque, of a homogeneous appearance, and cream-colour in the centre, of a walnut size and shape, its edge semi-transparent, but equally hard as the centre, in which no bands or lines could be traced. The leaflets of the lobe, with their medullary centre and *pia mater*, were not pushed aside by its growth, but involved indiscriminately in its texture.

The membranes of the spine were also distended with transparent fluid. The cord itself had a very natural appearance, but it was firm, although less so than the central parts of the brain.

AFFAIR OF M. THOURET NOROY.

The subscriptions to enable this physician to carry on legal proceedings, with the view of having the decrees of the courts of law in Normandy reversed, are carried on with considerable energy. The medical journalists do not hesitate to allude very pointedly to the backwardness of the great men, the magnates of the profession, and they make a very earnest call on them to support the honour and dignity of the profession, which has been insulted and oppressed in the person of one of its members. The provincial medical men are sending in their five and ten francs very freely. The sums already transmitted amount to near three thousand francs. Very strong language has been used on the occasion by some of the parties. For instance, the physicians of Marseilles protest very strongly against the attack made on the dignity and independence of the medical profession, by the civil tribunal of Evreux, and the cour royale of Rouen. "Every interpretation of the code which tends to establish the responsibility of medical men, is abusive, unjust, and degrading, fatal to the progress of science, and destructive to society."

Foreign Medicine.

ACADEMIE DE MEDECINE.

October 14*th*, 1834.

M. Boullay, President.

M. Cornac gave some details relative to the discovery of the cow-pox in Italy. A physician at Rome, Horace Maceroni, having been requested to examine some cows in the country affected with an unknown complaint, found that they were labouring under cow-pox; the greater part of the pustules were covered with crusts, either from the cowherds continuing to milk them, or from the application of butter. He collected a few of these crusts with the view of experimenting on them, and ascertained that those which had not been meddled with possessed the power of transmitting the disorder by inoculation; those to which butter had been applied, were rendered useless.

M. Maingualt read an essay on the acarus scabiei; he considers the vesicles as the effect and not the cause of the disease, and that the latter is to be referred solely to the acarus.

M. Cullerier exhibited tubercles of syphilitic origin, discovered in the brain.

At the meeting of the Academie de Medecine of the 10th of September, M. Ricord presented, in the name of M. Sawjer, a continual syphon, for the evacuation of urine from the bladder as soon as it arrives in its cavity.

ACADEMIE DES SCIENCES.

October 15*th*.

Composition of the Amosphere.

M. Chevallier stated that he had undertaken experiments upon the composition of the atmosphere, which he had not yet completed, but from which he had already obtained the following results:—that in general the atmospheric air of Paris and of many other places, holds ammonia and organic matters in solution; that the dew, at the moment of cooling, also contains ammonia and organic matters: this quantity of ammonia is sometimes considerable. The presence of ammonia may be readily explained, by the constant production

of this gas in such a variety of circumstances. The composition of atmospheric air varies in different localities, in consequence of a great number of particular circumstances, namely, the nature of the substances employed for combustion, the decomposition of animal and vegetable matter, &c. Thus the atmospheric air of London contains sulphurous acid, the air of cloacæ contains the acetate and hydro-sulphate of ammonia; and the air in the neighbourhood of Montfaucon has also ammonia and its hydro-sulphate.

SOCIETE DE MEDECINE PRATIQUE.

BARON DUBOIS, President.

High Operation for the Stone—Pomegranate Bark in Tœnia.

M. Souberbielle mentioned that he had performed this operation on the 30th of August last, on M. Maillebay, 72 years of age, residing in the Rue de la Chaussee d'Antin, No. 8 bis, and removed seventy calculi, from the size of a pigeon's egg to that of shot. The patient had been labouring under his complaint for ten years. The sixth day after the operation he was going on well, and there was every reason to expect that he would finally recover.

M. Rousseau added a new proof of the efficacy of the bark of the pomegranate root in cases of tœnia. He presented one, the expulsion of which he had just caused, by giving for three days consecutively an ounce of the fresh bark, boiled in a quart of water until a fourth has been evaporated, the remaining three-fourths to be taken in wine-glassful every hour. When the bark has been dried, it should be macerated in boiling water for twenty-four or forty-eight hours, before it is used for the preparation of the decoction.

Cases of the Transfusion of Blood in Metrorrhagia.

BY DR. KLETT.

CASE I.—G. D., aged 41, the wife of a vine-dresser at Heilbronn, and the mother of several children, of a nervous temperament, was seized suddenly on the 17th Jan. 1828, after two months' suppression of the catamenia, with uterine hæmorrhage, which at first moderate, soon became very severe. It had lasted eighteen hours, when I was called in.

I found the patient exhausted and pale, with sunken features, and an almost imperceptible pulse; the quantity of blood which had been lost was considerable. Brandy fomentations were applied to the abdomen, and hot wine to the arms and hands. Two spoonsful of a solution of extract of rhatany in canella water, with a portion of the tincture of canella, and the acid of naphtha, were also administered. Friction on the chest and abdomen were also employed, and astringent injections thrown into the cavity of the uterus.

In spite of these measures, the patient was evidently getting worse; sulphuric æther with the oil of canella, was also administered, but the weakness and hæmorrhage continued to increase. Vision became indistinct, with vertigo, and to these symptoms were superadded coldness of the extremities, cold sweats, hiccough, the paleness of death on the features, which were assuming the Hippocratic cast, so that there could be scarcely any doubt that death was approaching. In such dangerous circumstances, I determined, for the first time in the course of my medical career, to have recourse to the operation for the transfusion of blood. By my direction, M. S., a surgeon, injected very cautiously into her veins about two ounces of blood, drawn from the husband, a strong, robust, and healthy man. The result of this transfusion was surprising. The patient almost immediately opened her eyes, which had hitherto been kept closed; the pulse could be again felt, and began to rise; the hiccough diminished, and soon ceased; the features reassumed their ordinary expression, and the natural warmth returned to the extremities.

The medicines which had been previously employed, were resumed; the hæmorrhage ceased, and the patient finally recovered. When asked what her feelings were when the transfusion was performed, she replied that she felt a sensation of heat carried onwards towards the heart, and that she ought to consecrate her renewed life to preserve mine.

CASE II.—On the 17th of February, 1828, I was called to the wife of a vine-dresser, aged 30. For the previous ten hours she had been labouring under hæmorrhage, which, though at first moderate, had rapidly increased. The most serious symptoms mentioned in the first case were already present, and the patient

was taking leave of her relatives in a weak and interrupted voice. She appeared as if already dead.

Remembering the success already obtained by transfusion, I determined to have immediate recourse to that operation. While waiting for the surgeon, I ordered the usual remedies employed in such cases. Transfusion was performed, as in the preceding case, and two ounces and a half of blood, drawn from the husband, were injected. The result of this operation surprised me, as well as all those who witnessed it, and who had been hitherto incredulous as to the advantages of the proceeding. Life appeared to be restored as by an electric shock. By the measures already indicated, the hæmorrhage was arrested, and the patient being put on tonics, speedily recovered.—**Medicinisches Correspondenz Blatt.**

Idiopathic Tetanus, successfully treated by Vapour-Baths and Opium.

BY GUYON VERNIER.

A child, thirteen years of age, keeping his flock one night, was greatly alarmed by the sudden appearance of a wolf, who carried off one of the sheep; he fainted, and in that state remained for some time exposed to the humidity of the air.

His parents found him in a state of great stiffness and suffering; when brought home I found him labouring under severe symptoms of tetanus. Trismus was not complete, but the movements of the jaw were difficult and painful; the abdomen was hard and tense, and the boy was constantly complaining. Pieces of wood covered with linen were placed between the teeth, to prevent the occlusion of the mouth in case of the spasm increasing. The boy was then exposed to a vapour-bath for nearly an hour; after which he was wrapt in a blanket, and conveyed to bed. The infusion of arnica with ammonia was then administered, which induced free perspiration. Three hours afterwards, the extract of opium was commenced, one grain every hour. The next day the symptoms had increased in severity, and the patient complained of severe pain at the base of the sternum, with constipation and suppression of urine. The trismus was so violent that the pieces of wood could not be withdrawn. The vapour-bath was repeated, and the opium increased. Ordered an enema, with four drachms of the sulphate of soda; oils and embrocations with camphor all over the body.

The third day he was in the same condition, and the remedies were continued, with the addition of a purgative. On the fourth, the spasms were more violent, and a fatal termination was apprehended. The dose of the opium was increased in quantity, and the infusion of arnica with the ammonia was continued. On the fifth, perspiration very free, and he passed a very fœtid stool; abdomen less hard, and some remission as to the pain. Continue. On the sixth, the pieces of wood slipped out of his mouth, and he could move the jaw a little. Camphor emulsion, dose of opium diminished. The seventh, relaxation of the muscles of the neck, and of those of the limbs in succession. Convalescence complete the twelfth day.—*Gaz. des Hôpitaux.*

Foreign Hospital Reports.

HÔTEL DIEU.

Metro-peritonitis—Sanguineous Evacuations—Mercurial Frictions—Death.

A WOMAN, 47 years of age, of a strong constitution, and generally enjoying good health, suddenly felt severe pain in the abdomen with vomiting, which lasted for twenty-four hours. Uterine hæmorrhage took place soon after, the blood continuing to pass for sixteen days from the vagina, in the form of blackish clots. This woman had no menstrual discharge for the next seven months, but was troubled with constant leucorrhœa to a great extent. The commencement of the complaint was marked by loss of appetite, thirst, dryness and heat of skin.

On the 11th of August, when she was examined, she presented the following symptoms:—abdomen enlarged, sonorous under percussion, and painful on pressure; slight headach; the vagina gave the sensation of burning heat; the uterus appeared to adhere to the surrounding parts; its orifice was almost entirely effaced. Nevertheless this patient had had two children; her last accouchement, which took place eight years ago, was followed by an illness, which lasted fifteen months. The skin had assumed a yellowish hue; the

pulse was 116: ordered to be bled to sixteen ounces (three palettes); to have baths, injections, and poultices.

12th. The features express inquietude and pain; the pulse is still frequent; abdomen tense and painful; the patient has vomited twice. The blood drawn presented a well-marked buff. Thirty leeches to the abdomen.

The next day the abdomen continues sonorous, but the pain is diminished, the hypogastrium only being painful on pressure; is more feverish; the heat of skin greater; the tongue red, with extreme thirst. Ordered to be bled from the arm, frictions with the Neapolitan ointment, lavements.

14th and 15th. The abdomen is more tense and the pain greater; the pulse is hard, quick, and intermittent. Mercurial frictions (one ounce and a half).

The next day the abdomen was soft, and she did not complain of pain; a dose of castor oil was given, which acted several times, and afterwards she could bear considerable pressure without pain; she still continued very feverish. The abdominal pain returned the next day with intermittent pulse, constant attempts at vomiting, followed by cold sweats, Hippocratic countenance, and death on the 20th.

Autopsy.—The abdominal cavity contained a large quantity of a milky fluid; the peritoneum presented numerous traces of inflammation, and was covered with false membranes. The serous membrane, covering the intestines, could be easily separated from the subjacent textures. The uterus was firmer than natural, and was much inflamed at its lower part. The other viscera were healthy.

Articular Rheumatism—Antiphlogistic Treatment.

A woman, ætat. 26, was admitted into the Salle Saint Lazare. She states, that two years ago she suffered from pain in the right wrist, which prevented her employing it for four months. On the 16th of July she suffered severe pains in the loins, which were soon transferred to the left shoulder. By the 30th, (the day of admission), the right wrist was again attacked. The joint was considerably swollen, but there was scarcely any fever. Twenty leeches were applied *loco dolenti*, and she was ordered simple tisanes.

The next day the leechbites were affected with erysipelatous inflammation, the rheumatic pain continuing, with a frequent pulse. Ordered to be bled from the arm, poultice, and refreshing drinks.

Aug. 1st. The erysipelatous redness continues, and also the tumefaction; the pain is more severe, but the fever is diminished. Thirty leeches were applied, followed by a poultice;—to continue the diluents.

2nd. The erysipelatous inflammation has assumed the phlegmonous character; the redness and tumefaction are extending up the fore-arm; no disturbance in the performance of the secretive functions. Was directed to have local and general baths, and to continue the poultice.

3rd. All the symptoms improving; there is less inflammation, and the pain and tension are diminished. She continued to improve, but, after the lapse of a few days, in consequence of some difficulty in moving the joint and the continuance of the pain, a blister was applied, which caused an increase of her sufferings for a time; within two or three days after, however, the rheumatism disappeared, and she was discharged on the 21st of August.

British Hospital Reports.

CHARING-CROSS HOSPITAL.

Case of Hydrophobia.

A MAN, aged 35, was admitted into the hospital on Monday, Oct. 20th, under the care of Dr. Golding, one of the physicians of this Institution. It appears that he sold apples, &c. in the English Opera House. About two months ago he was assisting to drive a cat out of the house, when she bit him on the hand; the wound, however, soon healed. On Sunday, the day prior to his admission into the hospital, whilst at dinner, he experienced an unpleasant sensation in the throat, with some difficulty of deglutition, and became alarmed; he then applied for medical aid.

He manifested the most characteristic symptoms of hydrophobia; the dread of fluids, the convulsive startings, twitchings of the muscles, &c. The ordinary remedies were resorted to, but afforded no relief. On Wednesday, at 5 o'clock in the evening, he expired.

On the following day a post mortem examination was made. Few, if any, morbid changes were presented. It was thought that the great nerves, the brain and spinal cord, with their membranes, were a little more congested than usual with venous blood, and the minute capillaries more injected. As usual, in those cases, death could not be referred to lesion of any organ.

APOTHECARIES' HALL.

Names of Gentlemen to whom the Court of Examiners granted Certificates of Qualification on Thursday, October 23rd:—Adam James Moore, London; Thos. Payne, James Grantham, Burgh, Lincolnshire; Prior Purvis, Royal Hill, Greenwich; Reginald Read, London; William Rudd, Hawes, Yorkshire; Thomas Dixon Jackson, Bentham, Yorkshire; Thomas Matthew, Groom Hare, Steyning, Sussex; Job Harding, Birmingham; Thomas Swindell Fletcher, Chesterfield; Charles Robinson, Horbury, Yorkshire.

MISCELLANY OF FACTS.

Midwifery.—Dr. Rigby proposes to the pupils attending his lectures a prize of five guineas in books, bound and stamped with the hospital arms, to be given to the author of the best Essay on the Varieties, Causes, Symptoms, and Treatment of Premature Expulsion of the Fœtus. The essays to be delivered at the Apothecary's, designated by a motto, before the first day of May, 1835.
St. Thomas's Hospital, Oct. 25, 1834.

Dr. Williams, Dr. Roots, and Dr. Burton propose giving each a prize of five guineas in books, bound and stamped with the hospital arms, to the physicians' pupils attending this hospital, for the best essays, illustrated by cases taken in the wards, on the following subjects:—

Dr. Williams—Typhus Fever.
Dr. Roots—Diseases of Mucous Membrane of the Alimentary Canal.
Dr. Burton—Conditions of the Brain producing Apoplexy and Paralysis.

The essays to be delivered at the Apothecary's designated by a motto, before the 1st May, 1835.
St. Thomas's Hospital, Oct. 23, 1834.

At the first meeting of the donors and patrons of the School of Medicine in Birmingham, it was resolved that the management of the funds of the institution should be vested in the governors at large, that they should elect all the officers and lecturers, and that all property should be vested in certain trustees. It was also determined that the library, which now contains upwards of nine hundred volumes, should be open, free of expense, three times a week to every legally qualified medical practitioner of the town and neighbourhood.

A lady has recently left funds to the Royal Academy of Medicine at Paris, to enable them to give an annual prize of five thousand francs for the best essay on the means of preventing, diminishing, or removing the injuries inflicted on the system by the affections of the mind. The reason assigned for the bequest is, that the lady, who is reported to have been very accomplished, herself fell a victim to an affection of the mind.

A County Lunatic Asylum is in contemplation for Northamptonshire. Amongst others who have taken an active personal part in its success are Lord Fitzwilliam, Lord Lilford, Sir C. Knightley, and nearly all the resident gentry of any note. The sum of cash already subscribed amounts to £13,226, of which about £3,000 has been expended in the purchase of land, &c. It is contracted to make the building hold about one hundred patients. The Lord Lieutenant of the County for the time being is to be president of the institution, and the remaining trustees the vice-presidents.

APPOINTMENTS.

Naval.—Surg. D. Kennedy to H.M.S. Algerine. Mr. G. Austin, assistant-surgeon at Plymouth Hospital.

Military.—Staff Assistant-Surgeon R. Turner to be assistant-surgeon to the 69th Foot, v. Fisher, whose appointment has not taken place.

DEATHS.

Dr. William Maxwell, late of Dumfries. Dr. James Monteath, of Buchanan-street, Edinburgh. Dr. H. Ainslie, Dover-street, Piccadilly. Mr. W. Bothwell, surgeon of H.M.S. Tweed. Mr. J. Work, surgeon, of Auld Toun, Dunlop. Dr. James Ferguson, of Rathkeale, Ireland, late of the 5th Foot. Mr. John Bull, surgeon, of Oxford. Mr. John Bell, surgeon, of Ripon. Mr. John Pawson, surgeon, of Parson Drove, near Wisbeach. Dr. Edward Holmes, of Cheltenham. Mr. Wm. Chubb, surgeon, of Plymouth. Dr. Richard Freston, of Great Whitcomb, Gloucestershire.

LITERARY INTELLIGENCE.

Anatomié Topographique, Descriptive et Pathologique des Parties qui se Rapportent à la Hernie Inguinale et Fémorale. Par Alex. Thomson, Docteur en Médecine de l'Université de Cambridge.

BOOKS RECEIVED.

A Treatise on Dropsy, exhibiting its Nature, Causes, Forms, Symptoms, Principles of Treatment, and Practical Application of these in the Use of the various Remedies employed for its Cure. By James Ford, M.D. Anderson, Edinburgh; Simpkin and Marshall, London. pp. 57. 1834.

The British Dissector, Part I., containing the Descriptive Anatomy of the Bones, Ligaments, and Articulations. By M. W. Hilles, Lecturer on Anatomy and Physiology in the Medical School, Marlborough-street. Shaw, Dublin; Renshaw, London.

An Essay on Clinical Instruction. By E. C. A. Louis, M.D., Physician to the Hospital of La Pitié, &c. Translated by Peter Martin, M.R.C.S. pp. 33. Highley.

METEOROLOGICAL JOURNAL.

MONTH. Oct., 1834.	Moon.	Thermom.			Barometer.		De Luc's Hygrometer.		Winds.		Atmospheric Variations		
23		55	55	37	29·40	29·44	76	71	W.	N.W.	Rain	Showry.	Fine
24		41	47	39	29·57	29·64	68	70	N.W.	N.W.	Fine	Fine	——
25	☾	42	45	41	29·76	29·86	71	71	N.W.	N.W.	——	——	——
26		43	45	46	29·96	30·12	73	73	N.	N.	——	——	——
27		50	53	48	30·20	30·23	74	76	W.	N.W.	Cloudy	——	——
28		52	54	43	30·27	30·35	77	78	N.W.	N.	——	——	——
29		50	51	47	30·44	30·39	78	74	N.N.E.	N.N.E.	Foggy	Cloudy	——

50, *High Holborn.* William Harris and Co.

All Communications and Books for Review to be forwarded (free of expense) to the Publisher, 356, Strand, near King's College.

THE

London Medical and Surgical Journal.

No. 145. SATURDAY, NOVEMBER 8, 1834. Vol. VI.

LECTURES ON THE THEORY AND PRACTICE OF MEDICINE,

BY WILLIAM STOKES, M.D.,

Delivered at the Medical School, Park Street, Dublin.—Session 1833–34.

LECTURE XL.

Nature of Continued Fevers—Symptoms of Typhus—Connexion of Petechiæ with Essential Fevers—Opinions of Huxham and Pringle—Symptoms referable to the Nervous, Respiratory, and Digestive Systems.

Gentlemen,—Before I enter on the consideration of exanthematous diseases, it will be necessary to examine the subject of ordinary continued fever. My reason for this is, that the phenomena of continued fever bear a closer relation to those of intermittent, than they do to those of the exanthematous, and as I have introduced the subject of fever by lectures which apply more obviously to the pathology of continued, than to that of exanthematous, fevers, I think it better to conclude this part, before we proceed to the rest.

I do not know, gentlemen, of any subject so difficult to lecture on as fever. It is, in the first place, next to impossible to give any description of it which will apply to all, or even to the majority of cases. The varieties of fever are infinite. It varies according to situation and climate, to the peculiar character of the epidemic, the constitution and habits of the individual, and the numberless complications of local disease. One of the best modes of examining fever is to take a brief but general sketch of the usual symptoms of what is called typhus, and, proceeding thence analytically, to review fevers of a nervous type, or those in which the symptoms are chiefly referable to disease of the brain and spinal cord, together with their respective nervous connexions; next, to examine those fevers in which there is a predominance of diseased action in the respiratory system, and, lastly, to ascertain the character of those in which the digestive tube seems to be principally engaged.

You will recollect, gentlemen, a principle which I have more than once impressed upon your attention, that we are to look on these fevers as general affections of the system, complicated, in the vast majority of instances, with local disease; and that I stated, that there was the greatest possible variety in the number, seat, and extent of these local affections. In some cases, they make their appearance almost at the commencement of the fever, in others they supervene at a more advanced period. In some instances, they are confined to a single system, or even a single organ, in others, the morbid action extends to all the splanchnic cavities.

The symptoms of typhus may be divided into two classes, the precursory or latent, and the actual or manifest. The precursory are more or less prostration of strength, a feeling of malaise without decided illness, an unusual paleness, a sensation of coldness, and, perhaps, some shivering, a sense of weight about the head, indifference to objects of business or pleasure, troubled sleep, and frightful dreams, some nausea, foulness of tongue, and loss of appetite. These symptoms may continue from a few hours to three or four days. In other cases, you will see the phenomena of typhus setting in at once, and with an awful rapidity. This occurs chiefly in cases where a severe epidemic is prevalent, or where the miasm of fever exerts its influence over bodies of men closely cooped up together, as we see exemplified in camp and jail fever.

Typhus fever frequently sets in with a state of the system closely resembling inflammation. The skin is hot and dry, the pulse full and bounding, and this often leads the practitioner to think that he has to deal with ordinary inflammatory fever, and he bleeds with the expectation of cutting it short. But it too commonly happens, that we are very seldom indeed able to effect this desirable purpose by blood-letting. You may succeed in modifying the symptoms, but you cannot arrest the disease. It is, in fact, a question, how far general bleeding is admissible in the great proportion

of cases of typhus. I shall examine this point more particularly when we come to the treatment of fever. If you take blood from the system generally in this apparently inflammatory condition, you may find in some instances, that the clot will be of a red colour, and crusted at top with a slight coat of buff; in other cases you will perceive that the quantity of serum is trifling, the clot of a dark red colour, easily broken up, and without any buff.

Whether bleeding has been performed or not, the pulse begins to alter about the third or fourth day, and this simulated appearance of inflammation goes away. Then comes a train of nervous symptoms, anxiety, restlessness, delirium, tinnitus aurium, with an augmentation of the febrile symptoms towards evening. In the morning the patient feels better, and this is almost always the case, for we seldom meet with a case of typhus without morning remissions. In some cases the symptoms are aggravated on alternate days, so as to bear some resemblance to double tertian. Sometimes the exhalant vessels of the skin are in a state of great activity, and the patients sweat profusely almost from the commencement of the disease. These cases we have found in the Meath Hospital to be extremely tedious. In the greater number of cases, the skin remains dry, and this often continues through the whole disease up to its termination. With respect to the appearance of petechiæ, they may occur at an early period, or not until towards the close of the fever. The appearance of petechiæ has one particular value, as being a symptom most commonly connected with fevers of an essential type, and rarely with those of a simple inflammatory character, or where the fever is symptomatic of local disease. Thus we very seldom meet with petechiæ in the fevers which accompany cerebritis, or pneumonia, or gastro-enteritis. On the other hand, where the inflammation of these organs is secondary, and supervening on typhus, petechiæ are exceedingly common.

As the disease advances, we observe other symptoms. The patient has more or less stupor, sighs frequently, answers briefly and impatiently when questioned; his eyes are red, glazed, and filled with the lachrymal secretion; his nostrils obstructed with adhesive mucus, which he repeatedly attempts to remove; he is sometimes quite deaf, without any apparent affection of the ear; his lips are dry and chapped, and his teeth and gums crusted with a dark sordes. If you ask him to put out his tongue, he moves it slightly forwards, being unable to thrust it out fully, from its dry state and the injury of its muscular functions. Its upper surface is generally of a dark-brown colour, or even black, its mucous covering chapped, and inclined to bleed, and feeling quite dry and relaxed; but there is an infinite variety in the state of the tongue in typhus fever. Not unfrequently it is moist; and I have seen cases in which it was nearly natural throughout the whole course of the disease. In many cases it is red, dry, tremulous, and pointed; and in such cases we have generally observed symptoms of gastro-intestinal irritation. But it is a well-established fact, that we may have fever with gastro-intestinal disease, and yet without any characteristic appearance of the tongue. In typhus, the tongue is not a correct index of the state of the intestinal canal; and if you were to take it as the grounds of your diagnosis you would often fall into error. You should therefore, as I have before taught you, study the appearance of the tongue in fever more as indicative of the general condition of the patient than of the state of the gastro-intestinal membrane. You may have extensive disease with a natural tongue, and you may have a morbid state of the tongue without any appreciable intestinal lesion. You will often see in the advanced stage of fever a red, dry, and chapped tongue become pale, moist, and smooth, under the use of wine, carbonate of ammonia, and other stimulants; and yet, in such cases, if you were to judge by the tongue alone, you would say that there was inflammation of the intestines, and that the employment of stimulants was dangerous. And, indeed, if it was ordinary inflammation, we know that it would be exacerbated by stimulants.

In some cases of typhus there is thirst, and a desire, sometimes for hot, sometimes for cold, drinks; in other instances, the patient drinks very little, and never complains of thirst. At one time wine is relished, at another time it is not. The skin varies as to its condition, being sometimes bedewed with profuse clammy perspirations of a well-known odour; but in the greater number of cases it is dry and harsh. Sometimes there is diarrhœa, tympanitis, and tenderness of the belly; occasionally, it is soft and flaccid, and pressure is borne without inconvenience. The state of the urine, which engrossed so much attention in former times, cannot be looked upon as a diagnostic in typhus. In bad cases, it is as well as the stools passed involuntarily. This at first occurs during the patient's sleep, but as the disease advances it is passed unconsciously. It is not uncommon, on the other hand, to meet with retention of urine.

As the symptoms advance, the patient lies entirely on his back, quite indifferent to every thing, with his lower extremities separated, and the trunk constantly sliding down in the bed from debility. The eye is dull, without meaning, and of an ecchymosed appearance. During his brief and unrefreshing slumbers, the eyelids are only half closed, and the eyeball is turned upwards. The delirium, feebleness of pulse, and prostration of strength increase. A quantity of liquid fæces is discharged involuntarily, the belly is tympanitic, and hiccup comes on, which generally proves a very distressing symptom. At this period, also, we frequently have hæmorrhagic discharges from various parts of the body, the nose, stomach,

bowels, and urinary organs. If the patient holds out for any considerable length of time, bed-sores begin to form on the back and loins, which are frequently surrounded by an erysipelatous border, and have a great tendency to run into mortification. The patient gradually gets weaker, his extremities become cold, his pulse thready, irregular, and indistinct, the hiccup increases, and there is sometimes regurgitation. He now begins to sink rapidly, his eye is glazed, his jaw fixed, his face Hippocratic, his stupor increases, and he dies with tracheal rattle.

The foregoing is a tolerably correct account of the symptoms of ordinary typhus, but of course it cannot be looked upon as complete, for the symptoms of this disease are remarkable for their great variety. With respect to the prognosis, it is also found to vary. Some patients will have almost all the symptoms above-mentioned, and yet may recover; but, generally speaking, the prognosis under such circumstances is unfavourable. The worst symptoms are those which point out lesions of the nervous system, and a morbid condition of the fluids. All the phenomena of nervous derangement, delirium, coma, subsultus tendinum, and spasms, are to be looked upon as unfavourable, and the same may be said of bad petechiæ, hæmorrhages from the intestines and urinary organs. In cases presenting these symptoms, the prognosis is always of the worst kind. The most malignant form of typhus is that which arises among bodies of men closely crowded together, as we see in the camp, jail, and hospital fevers. Here the disease appears to be the result of an excessive and highly-concentrated dose of the poison of typhus. Where a number of persons are confined together in close apartments, you can easily conceive that the poison of the disease will act with tenfold severity, and it is in such cases that we often observe the phenomena of local inflammation to be most extensive and violent. I have before alluded to the experiments of MM. Gaspar and Magendie, and mentioned the fact of fever, of a distinctly typhoid character, being produced by the injection of putrid substances into the veins of animals. Now in those cases it was observed, that the greater and the more concentrated was the dose of putrid poison, the more closely did the consequent fever resemble bad typhus, and the more violent and extensive were the local inflammations. Now if these local inflammations are in proportion to the quantity and concentration of the dose of poison, you can easily conceive why local disease should assume such threatening appearances in the jail and camp fevers. This excess in quantity and concentration in the virulence of the typhus poison, I look upon as the true cause of the malignant nature of these fevers. And if we take the reverse of these cases, if we look to the remarkable effects which result from separating the sick from those who are in health, we have an additional light thrown on this subject. In cases of camp fever, it has been repeatedly observed, that when the camp was broken up, and the sick separated into different parties, the fever totally disappeared, although the patients happened to be exposed to bad weather and the jolting of carriages.

Before we proceed to analyse the symptoms of typhus as they appear in the nervous, vascular, respiratory, and digestive systems, it will be necessary to make a few observations on petechiæ. On this subject there are two opinions; one is, that they are analogous to the exanthematous eruptions, and, as it were, an attempt of nature to relieve the internal disease by external revulsion. Another opinion is, that they proceed from a weakened state of the cutaneous capillaries, accompanied by a dissolved condition of the blood, and that they are in fact a kind of passive ecchymosis. I am inclined to think that we may adopt both opinions. There can be no doubt that petechiæ are sometimes of an exanthematous character. We see them at an early period of the disease, when there is but little debility and where there are no other signs of a morbid condition of the fluids, and we know, too, that they are sometimes productive of relief, and that they form elevations, and desquamate like the exanthematous eruptions during the progress of the disease. All this proves that petechiæ are sometimes to be looked upon as bearing a close analogy to the exanthemata; on the other hand, we may find them without any of these characters, and presenting a livid or black colour. Quarin divides such into three classes,—the red, the livid, and the black. The black are of the worst character, the livid are less dangerous, and the red are the most favourable, though he does not say that they are entirely devoid of danger. It is the red petechiæ, however, that are to be considered as having a resemblance to exanthematous eruptions. It sometimes happens that they are of very considerable size, simulating the appearance of purpura hæmorrhagica. In the advanced stage of fever, large petechiæ of a livid or black colour are dangerous, and point out a morbid alteration in the fluids. On the other hand, the earlier they appear, and the redder and smaller they are, the better; but when they occur at an advanced period of the disease, are of a dark colour, and accompanied by hæmorrhages from the bowels or urinary organs, they may be looked on as indicating an unfavourable prognosis. Huxham looks upon them as sometimes critical; I suppose he alludes to the first or exanthematous description. Pringle is of a different opinion. Our experience in the Meath Hospital does not enable us to make any other remark on this subject, than that we have seen them followed by some relief, but no exact or distinct crisis. The worst form in which they can appear is that of vibices, or large dark spots like purpura hæmorrhagica, and in

this form, as Huxham observes, they afford grounds for making a most unfavourable prognosis.

It is hardly necessary for me to state, that persons differ exceedingly in their power of bearing up against an attack of fever. It is a fact almost universally known, that one man may be favourably circumstanced for resisting the disease, while another may be a bad and unfavourable subject. Any thing that has a tendency to weaken and depress, as excessive apprehension, exhausting labour of body or mind, the debility brought on by mercury, bad food, and foul air, grief, care, and other depressing moral causes, all these are circumstances which, generally speaking, render fever exceedingly dangerous. Inhabitants of towns are worse off in this respect than those who live in the country; this is a fact which has been well established.

Let us now enumerate briefly the symptoms of typhus, arranging them in separate groups, according as they appear in the nervous, respiratory, or digestive systems. First, with respect to the nerves. We observe in typhus a remarkable prostration of strength, and it has this peculiarity in it, *that it cannot be referred to a local cause.* This is what has been termed direct prostration, in contradistinction to that which occurs as a consequence of various local inflammations. It would not be correct to look upon it in the same light as you would the prostration which attends simple primary inflammation of the digestive system, or peritonitis; for we know that bleeding will remove this and restore the patient's strength. But the prostration of typhus cannot be removed in this way, for it exists generally without any perceptible local cause to account for it. We have, in the next place, agitation, anxiety, and loss of sleep, a remarkable and very unfavourable symptom. So unfavourable is it, that when present, though all the other symptoms may be trifling and free from danger, the chances are often against the patient, whereas, if he sleeps well, the case will very seldom go on badly, even though there may be other circumstances in it of a very threatening character. We next meet with the different varieties of delirium, furious excitement of the brain, or low and quiet muttering; then the symptoms connected with the muscular system, as floccitatio, subsultus tendinum, pains and spasms in various parts of the body, tremors, and paralysis of the sphincters. Now, with respect to the circulation, I told you, that in the commencement of the disease we frequently observe an excitement of the heart and arterial system simulating the phenomena of active inflammation. In the advanced stage this disappears, and we have a weak and jerking action of the heart, with a feeble irregular pulse, which can be compressed by a slight touch of the finger. In some cases, where the pulse is naturally irregular, the effect of fever is to render it regular; this is a curious circumstance, and you should not neglect enquiring into it. Another remarkable symptom is, that you may have a very obvious disproportion between the action of the heart and the pulse; this is most commonly a sign of disease of some internal organ. With respect to the state of the blood itself, I do not intend to make any particular observations. We know almost nothing on this very interesting subject. All we can say is, that the blood is altered in its condition; but what the nature of that alteration is we know not. Notwithstanding all that has been written on the subject, there has been as yet no valuable indication, no practical improvement founded on the state of the blood in fever. There can be no doubt, however, that the condition of the blood (if known) would furnish a most important link in the chain of phenomena, and would be productive of a more certain and successful treatment. Still it is only a link, and the treatment of fever will still continue to partake of a more or less empirical character, as long as we remain ignorant of those profound lesions of innervation, with which it appears to be so intimately connected.

When we turn to the respiratory system, we find typhus presenting here also a very numerous and important group of symptoms. In some cases we have hurried breathing, with cough, and signs of organic lesion of the lung; in other instances the breathing is accelerated, but we are not able to detect any appreciable lesion. Here we have a purely nervous dyspnœa; in the former case we have it co-existing with disease of the lung, which can be detected by the stethoscope. Hurried respiration is an unfavourable symptom in fever. It points out either an organic affection of the lung, or a sympathetic excitement. Hurried respiration, without pulmonary disease, is an anomalous symptom, and all such are to be looked on with suspicion. We have sometimes the symptoms of a general affection of the respiratory system, cough, dyspnœa, lividity of countenance, and bloody expectoration. There is nothing more common in typhus than catarrh, or congestion of the lungs, or pneumonia. A great many fever patients die of extensive but latent and neglected bronchitis. The patients may go on for days and weeks without presenting any thing capable of arresting the attention, or exciting the suspicions of the mere symptomatologist; they will die with tracheal rattle, and, on dissection, the whole bronchial mucous membrane will be found in a state of intense inflammation.

When we come to the digestive system we find numerous morbid alterations. The lips are dry and chapped, the gums red, dry, and covered with an adhesive mucus, the teeth crusted with a peculiar sordes, the tongue in some cases natural, in others appearing as if it had been dried and then glazed over, in some covered with a dirty white mucus towards the centre, and clean towards the edges and tip; sometimes its mucous papillæ are enlarged, red, and prominent; while, in other cases, it

is of a dark brown or black colour, its upper surface chapped and inclined to bleed, and its muscular functions impaired, so that the patient is unable to put it out when desired. Then we have thirst, nausea, vomiting, and hiccup. In some cases the desire is for cold drinks, in others for hot, and occasionally there is no thirst, and the patient drinks only when he is requested, and then swallows merely what is sufficient to moisten the mouth and fauces. In some cases the fluid ejected from the stomach is of a bilious character, in others it is dark, or like coffee-grounds. The evacuations from the bowels present a very remarkable variety. They may be thin and liquid, or solid and figured; they may be clay-coloured, brown, or black; and they may be passed at considerable intervals of time, or they may be frequent and harassing. Generally speaking, they are liquid, of an unhealthy colour and consistence, and have a peculiar and very offensive odour. Obstinate constipation may be met with, but this is very rare, and in the great majority of typhus fevers there is rather a tendency to diarrhœa. You will have eructations, borborygmi, and tympanitis. You may also have jaundice, and this is generally to be considered as a bad symptom in fever.

In order to get an accurate idea of these symptoms you must proceed analytically, you must pass in review the cerebral, respiratory, circulating, and digestive systems, and see how far the symptoms can be connected with actual disease of the three great cavities.

LECTURES
ON
MIDWIFERY & THE DISEASES OF WOMEN AND CHILDREN,

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LECTURE VI.

Abscess of the Uterus—Prolapsus Vesicæ—Nymphomania—Sterility.

Gentlemen,—Besides prolapsus uteri, other affections of a more dangerous character may be the results of leucorrhœa; that peculiar form of leucorrhœa, viz. the white mucous discharge, which I mentioned as being secreted by the glands of the cervix uteri, is, in fact, merely a symptom of their being in a state of inflammation; the cervix becomes swollen, hot, and extremely painful to the touch, and, if neglected, the disease is very liable to terminate in abscess, or some organic degeneration of the part. The patient is attacked by an uneasy sensation in the back and lowest part of the abdomen, which gradually becomes converted into pain, the pain is increased by whatever tends to call the neighbouring parts into action, such as riding, or by whatever produces pressure upon the part affected; in this way the passage of a hard and large portion of fæces causes much distress, for not only are the blood-vessels filled in the act of expulsion, but, during the evacuation, constant and sometimes considerable pressure is made on the cervix of the uterus. Irritation about the rectum is occasionally an attendant upon the complaint, but not so frequently as irritability of the bladder; the close connexion between the neck of the bladder and the neck of the uterus will account for this, independently of the sympathy which is known to exist between these parts *.

Where an abscess is about to form there is a considerable increase of all the above mentioned symptoms, with a sense of much heat, distension, and bearing down; the pain becomes more acute and throbbing, and at last, while straining to evacuate the bowels, or during any other exertion of the abdominal muscles, as coughing, &c., or sometimes of itself, the patient suddenly feels something give way within her, and this is followed by a great remission of all her symptoms; the discharge generally finds an exit by the vagina, or into the rectum, from adhesions having been formed between the intestine and uterus, occasionally it ruptures into the cavity of the uterus, which, as the pus continues to collect there, becomes considerably distended. In the preparation, which I here show you, you will see an unusually beautiful specimen of abscess of the cervix uteri; it has been engraved by Dr. Hooper, and forms the subject of the third plate in his splendid work on the Morbid Anatomy of the Uterus; I will, therefore, give you his own description of it:—

"The uterus and its appendages from a subject in her 40th year, cut open posteriorly, a part removed, and the whole so dissected and disposed as to show the diseased parts; the canal, leading from the os uteri through the cervix, is completely obliterated, and the cavity of the uterus very much enlarged; the parietes of the uterus are remarkably thin but very healthy; the cervix uteri is very much elongated, enlarged, and indurated; the vagina is laid open and part cut away to expose the state of the os uteri, which is obliterated, and its labia destroyed, so as to leave no trace of them; the abscess ruptured into the cavity of the uterus, a portion is cut away laterally, the better to expose it; the cavity of the uterus contained six ounces of good pus; the ovaria present several cicatrices."

In this instance, the disease was confined merely to the os and cervix uteri, the former of which has been entirely destroyed, which is a stage not commonly seen in preparations, it being more usual to see a considerable portion of the uterus implicated in the disease, as in the preparation which I now show you. This is the original preparation from which Dr. Hooper's second plate was taken; it gives you

* Clarke on Diseases of Females.

an instructive view of the ravages which these diseases can produce. His description is as follows:—"The uterus and appendages from a subject, aged 50, in the cavity of which an abscess has formed and ruptured into the vagina; the history of this case leaves no doubt of a sub-cartilaginous tumour having formed within the cavity of the uterus, suppurated and sloughed away per vaginam; the uterus is very much enlarged and diseased from long continued acute inflammation; a part is removed to expose the cavity of the abscess, the sides of which are the parietes of the uterus, every where covered with an albuminous and puriform secretion; the uterus itself is thickened and hardened, its cervix destroyed; the sides of the os uteri are ulcerated, and every part of the peritoneal covering inflamed, thickened, and covered with albumen; the vagina here and there ulcerated; layers of solidified albumen; the ovaries drawn up to the fallopian tubes, and covered with organised tissue; the fallopian tubes are enlarged and diseased; the fimbriæ destroyed; the peritoneum, forming the broad ligament, is every where thickened and covered with albumen, and partly organised, and in some places very firm and filamentous."

The treatment of the white mucous discharge I have already considered under the head of leucorrhœa; where the pain and other symptoms become more severe, the free application of leeches to the cervix uteri will be of great importance; where fluctuation can be distinctly felt, and if the spot be convenient for such a purpose, I should be tempted to make a puncture and let out the contents of the abscess, which it will be very desirable to evacuate through the vagina if possible, we shall thus be enabled to inject such remedies as shall best assist the process of cicatrisation; under no circumstances will the success of our practice depend more on the state of the general health than here. We must not only support the system, whilst the abscess is forming and suppuration going on, but endeavour to give a healthy action to the process.

We now proceed to the subject of *prolapsus vesicæ*.

I mentioned to you, gentlemen, that a relaxed state of the vagina was the proximate cause of prolapsus uteri; I will now give you a few observations on the effects produced by partial relaxation of this canal, effects which have been but little attended to, except by Sir C. M. Clarke. The anterior wall of the vagina, you are well aware, is in immediate contact with the back part of the urinary bladder, and, in fact, by which this is retained in its place; hence it follows, that when the anterior portion of the vagina loses its tone and becomes relaxed, it is no longer capable of affording that degree of support to the posterior wall of the bladder, which it otherwise would do; hence it yields to the distension and weight of the urine, and, instead of the fundus rising as the urine accumulates in the bladder, the posterior wall having no support, bulges out into the pelvis, so that we feel the anterior portion of the vagina distended by a fluctuating tumour; this may vary in extent, from merely a slight prominence to a considerable tumour projecting between the labia.

The term *procidentia vesicæ* is given to this disease by Sir Charles Clarke, first, because it is really the bladder which falls, and which carries the vagina with it in the same way in which a falling uterus does; and secondly, because the name directs the mind of the practitioner to an important part of the treatment. This disease, like prolapsus uteri, will be most likely to occur when the vagina is relaxed, as after child-birth, and women who have borne many children are the most liable to the complaint, but it may happen at any period. It is the posterior part of the bladder which descends, or that which lies behind the entrance of the urinary passage.

The symptoms of the disease in some respects resemble those of prolapsus uteri; but some of the latter are wanting, and others, not present in prolapsus uteri, are met with in this ailment. The weight of the part induces the woman to complain of a bearing down, not however, to the same extent as in prolapsus uteri; and it is a curious circumstance, that the sense of bearing down is in some women greatest in the horizontal posture. In the night, therefore, the patient is greatly annoyed by this sensation, which is frequently coupled with a perpetual desire to make water. When any urine is retained in the bladder, the patient is much more uncomfortable, as the size of the tumour is much increased when the bladder is full, and *vice versâ*. The tumour seldom goes away entirely, because some urine generally remains in the bladder immediately after the woman supposes she has emptied it, it appearing that these muscular fibres of the bladder, which form the pouch or tumour, have not the power of contracting so as to expel the whole of the urine. A mucous discharge often attends the disease, but the quantity varies; in some cases it is very profuse. The peculiar symptom which marks this complaint is a pain referred to the navel, with a sense of tightness there. This pain is greatest when the bladder contains the largest quantity of urine; and, as it parts with its contents, the uneasiness diminishes, till at last, when it is empty, or nearly so, the symptom goes off altogether. The superior ligament of the bladder runs from the fundus of the bladder to the navel, to which it is attached; and, perhaps, an elongated state of this ligament (the remains of the umbilical arteries), or the effect produced by the dragging upon the navel itself may account for this symptom. The distinguishing mark between prolapsus uteri and prolapsus vesicæ is the absence of those stomach symptoms which attend the

former. Although the stomach sympathises with the bladder under many states of disease arising from altered structure or disordered action, it is by no means so frequently affected by disorder of the bladder as by that of the uterus, and very rarely, if ever, is affected by the mere displacement of the bladder. On examination per vaginam, the diagnostic mark of prolapsus uteri, viz. the os uteri, is wanting; we cannot feel any opening into the tumour, but it is equally distended in all directions, and generally has an evident fluctuation. In prolapsus vesicæ of long standing, the pressure of the posterior part of this viscus (when containing some urine) upon the cellular membrane connecting it with the anterior part of the cervix uteri, elongates this cellular membrane; but, as it does not yield readily, the anterior lip of the os uteri is dragged down with it, so as to be very much lengthened. In this altered state of the parts, the os uteri, instead of being found in the centre of the pelvis, opens directly backwards, and lies in contact with the posterior part of the vagina, so that the space between the elongated anterior lip of the os uteri and the posterior part of the vagina is very small *. Pessaries have been recommended in this case as in prolapsus uteri. I have never seen a severe instance of prolapsus of the bladder; but, from the slight cases which I have occasionally met with, I should be inclined to try precisely the same plan of treatment which I have recommended in prolapsus uteri.

Let me strongly advise you to read Sir C. Clarke's excellent chapter on this subject in his work on females. I have given an abstract of it in the present lecture, for he is the only author that I know of from whom you can obtain original and practical information on this affection.

Before I proceed to consider the *organic* diseases to which the female organs of generation are subject, there are two other diseases of considerable importance, upon which I wish to offer a few observations,—I mean *nymphomania* and *sterility*.

It is, perhaps, difficult to select a more melancholy condition for a female to be in, or one which outrages every feeling of modesty and propriety more than nymphomania, where every obstacle which reason and conscience can raise against it yields, or is completely broken down by an overwhelming cupidity for sexual intercourse. This disease is observed to occur both in old as well as young subjects, especially in those of sanguineous temperament and robust habits; occasionally it is seen to appear at the period of incipient puberty, and is then connected with chlorotic symptoms; in others it is observed in women of more advanced age, especially in those who are near the time for the cessation of the menses; it is even observed to occur, though rarely, during the earlier months of pregnancy. Carus, who has given some very interesting observations in his "Gynakologie," divides it into three grades or degrees, which he characterises by the names of *salacitas*, *melancholia uterina*, and *mania*. The first is where the patient is not lost to every feeling of modesty, although her appearance betrays a great degree of sexual excitement; the face is flushed and glowing, the eyes glisten, the lips are prominent, and she endeavours to obtain the consummation of her object by a voluptuous manner of dressing and conversation, although these patients are not unfrequently the subjects of masturbation. The second degree, or *melancholia uterina*, is where the better feelings of the patient are completely overpowered by one irresistible feeling of lasciviousness. She sinks into a state of gloomy staring; the health suffers, she becomes emaciated, her sleep is disturbed, her digestion deranged, every thought is directed towards venery, and her restless eye and manner upon the approach of a man betray the nature of her disease. The third, or extreme degree, deserves but too well the name of *mania*, for here she is no longer under the controul of her will; the unhappy patient raves, tears off her clothes, furiously seizes upon every man she sees, she screams, the evacuations are discharged unconsciously, and when she becomes exhausted by her violent exertions, a brooding calm of melancholy succeeds, or even a state of actual coma. Nymphomania in this state, if not quickly relieved, soon destroys; the constitution sinks more and more. Idiocy, emaciation, dropsy, or even apoplexy, close the scene, if it be not, as is sometimes the case, prematurely terminated by an act of self-destruction.

According to Carus, nymphomania depends upon a state of chronic inflammation of the ovaries, but I am very far from being disposed to attribute the disease *always* to this cause, because several cases which have come under my own observation and that of others, prove decidedly that many other affections of the generative organs, besides chronic inflammation of the ovaries, are capable of exciting it. The prurigo pudendi muliebris, as Dr. Willan has observed, is quite capable of inducing a state of nymphomania, and he has quoted some interesting observations from Lorry in confirmation of it; an excitement of venereal sensations will always take place from the constant direction of the mind to the parts affected, as well as from the means employed to procure alleviation. The nymphomanic affection which occurs in the early months of pregnancy is, as far as I know, merely the result of an aphthous state of the vagina and external parts, and which is attended by intolerable itching. In cases of obstinate hysteria with chlorosis or amenorrhœa, a nymphomanic state is not unfrequently induced, although perfectly unconnected with any disease of the ovaries. An inflamed state of the clitoris, or from the constant application of irritation to this organ, will also act as a cause, and Richerand, in his

* Clarke on Diseases of Females.

Nosographie Chirurgicale, has given an interesting case to that effect, where amputation of the organ was attended with complete relief. Ascarides in the rectum, or having crawled from thence into the vagina, will occasionally produce sufficient irritation to cause the disease. There can be no doubt that the ovaries are quite as much the chief agent in the source of sexual appetite and capability of generation in the female as the testes are in the male, and the observations of Professor Carus, that a chronically inflamed state of these organs will produce nymphomania, deserve attention; still, in many cases, I should be more inclined to attribute this condition of the ovaries to the *effects* of nymphomania, than the nymphomania to it. We know well that inordinate excitement of the male organs will cause a state of chronic inflammation, and gradually lead to organic disease. Why, then, should it not do the same with the female? moreover the effects of chronic inflammation of the ovaries are repeatedly met with, where no symptoms of nymphomania have been present.

The treatment of the disease must vary according to its cause; if it be connected with prurigo pudendi muliebris, if there be an appearance of tension or fulness of those parts, and sometimes with inflamed itching papulæ on the labia and mons Veneris, cooling saline laxatives, bland unirritating diet, and constant application of *warm* Saturnine lotions, will generally relieve the symptoms. A solution of corrosive sublimate in lime water, in the proportion of ℈ ss. of the one to ℥ viij. of the other, has been used with success. Where the itching depends on an aphthous state of the parts, as is sometimes the case in pregnancy, a solution of borax affords almost instantaneous relief. Where the patient is young, plethoric, and of a sanguine temperament, moderate venesection will be of much advantage. She should be removed to a fresh, and, if possible, cool atmosphere; all feather beds, warm clothing, &c., should be avoided, and a hard mattress with the lightest covering substituted. The diet should chiefly consist of vegetables and fruit, with cooling acidulated drinks; all late hours, company, balls, &c., must be strictly forbidden, and the mind, as well as the body, agreeably, but actively, employed, and, in the milder cases, travelling will be very advantageous. Where the disease has been produced by a badly adapted pessary, this must be removed; where it has been brought on by leucorrhœa, the treatment necessary for that complaint must be put in practice.

According to Astruc, the disease has been removed by accidental circumstances, such as a smart uterine hæmorrhage, hæmorrhoidal discharge, long-standing debilitating leucorrhœa, the occurrence of actual pregnancy (this, however, can only take place in the milder forms of the disease), and also where the uterus has been considerably prolapsed, and thus exposed to the antiphlogistic effects of the external air. With this last observation, however, I am not much inclined to coincide.

By *sterility*, I mean that state of the adult female, where, with all the external requisites necessary to impregnation, this condition does not take place.

It will of course be understood that no reference is here made to sterility from impotence on the part of the husband, from mutual disinclination of the parties, &c., as these points strictly belong to medical jurisprudence. Sterility can scarcely be considered as a disease of itself, but rather as the effect of some general or local morbid condition, which, from the influence it exerts on the female system, demands particular attention. It may arise from a phlegmatic or rather masculine development of the system, a state which is usually attended with defective menstruation, and little or no venereal appetite; also from extensive congenital malformation of the organs of generation, viz. where the ovaries or uterus are wanting, obliteration of the vagina and os uteri, general contraction of the vagina, unusually large and strong hymen, or even a very narrow pelvis. Besides congenital defects, those various injuries of the organs of generation may be enumerated, which either prevent sexual intercourse, or prevent the semen from being properly received or retained. Of this kind may be enumerated severe perinæal lacerations into the rectum, prolapsus vaginæ, and prolapsus or inversion of the uterus, extensive lacerations and abscesses of the os uteri, but particularly degenerations of the ovaries, obliterations of the fallopian tubes, &c., &c., the presence of foreign bodies in the external or internal passages will also prevent impregnation, as badly applied pessaries, large polypi in the vagina or uterus, &c. Great atony of the organs of generation with weakness, accompanied either by a state of torpid insensibility or morbid sensibility, will cause barrenness, the former characterised by a cold flabby insensible state of the parts, the latter by pain and spasmodic affections of those organs. This state of weakness may be induced by various causes, as from a dissipated life, long standing leucorrhœa, profuse menstruation, rapid succession of labours, frequent abortions, syphilis, dropsy, &c., and, lastly, the too frequent enjoyment of connubial intercourse.

The prognosis, as to the curability or incurability of barrenness, which is frequently of great importance in a forensic point of view (for instance, in cases of divorce), depends entirely on the nature of the cause which has produced it; it will be unfavourable when it is the result of considerable malformations, which admit of no relief by operation, or by injuries of single organs of generation, which have taken place at a later period, as, for instance, ovarian dropsy, &c. On the other hand, where it has been produced

by changes or malformations of the genital organs, which admit of cure, as polypi of the uterus or vagina, slight prolapsus of the uterus, &c., the prognosis will be more favourable. It may be taken as a general rule, that there is a better chance of cure where it depends on functional than where it depends upon organic disease. In like manner as the prognosis, so does the treatment of sterility vary according to its different causes. Hence it must be evident, that where it depends upon a masculine habit of body, combined with defective menstruation and sexual feelings, absence of some of the genital organs, contracted pelvis or vagina, no assistance can be rendered. On the contrary, where depending on some *curable* disease of the genital organs, as an imperforate condition of the uterus or vagina, leucorrhœa, uterine and vaginal polypi, &c., our practice must be regulated according to the peculiar cause. Under this head comes the general phlegmatic habit, characterised by the flabby appearance, slow pulse, indolent temperament, &c. In such a case a more stimulating diet, the use of good old wine, aromatic baths, and afterwards sponging the spine and loins with spirit, the use of electricity, and exhibition of bark or quinine, with tinct. cinnamomi, aurantii, &c., the use of the Bath, Pyrmont or other mineral waters, travelling with agreeable society, will all be found useful.

Where the passages are very contracted, the use of saponaceous baths, friction with oil or lard on the perinæum, and introduction into the vagina of sponges dipped in oil or some emollient have been recommended.

It is particularly worthy of remark, that where the passage is so narrow, conception will frequently follow when sexual intercourse takes place at or near to the termination of a menstrual period, because at this time the genital parts are more relaxed, and from the well-known fact that women conceive more readily at this time than any other. The treatment of the different displacements to which the unimpregnated womb is occasionally liable, viz. prolapsus, &c., have been already considered, as also leucorrhœa, menorrhagia, and the other disorders of menstruation. Anteversion I shall speak of, when upon the subject of retroversion of the gravid womb, and polypi after I have considered the organic diseases of the uterus. The various organic diseases of the uterus give, of course, a highly unfavourable prognosis, for although conception is by no means incompatible with some of these conditions, still the child is seldom carried the full time, or, even if it be, is seldom born alive. To him whose practice lies among patients in the better ranks of life, sterility is a subject of the highest importance, and well deserving his most serious attention. The whole therapeutic and dietetic treatment of the above-mentioned causes requires careful management, for he must be guided not so much by rule and routine as by the peculiar habit and constitution of his patient; above all, the most minute attention should be paid to the state of the digestive organs, for many of the curable cases of sterility depend upon some functional disturbance of the chylopoietic viscera.

LECTURES
ON
FORENSIC MEDICINE,
DELIVERED BY
DR. HAY GRAHAM,
At the Westminster School of Medicine.

LECTURE IV.

Pregnancy.

Gentlemen,—As the symptoms and duration of pregnancy are often questions of judicial inquiry, it will be proper to bestow that attention on the subject which its importance requires.

By the laws of ancient Rome, of France, and England, and every civilised nation, pregnancy has ever been considered a sufficient reason to respite the execution of judgment. In speaking of this subject Blackstone observes, that "respites may be also *ex necessitate legis*; as, where a woman is capitally convicted, and pleads her pregnancy; though this is no cause to stay the judgment, yet it is to respite the execution till she be delivered. This is a mercy dictated by the law of nature, *in favorem prolis*, and, therefore, no part of the bloody proceedings in the reign of Queen Mary hath been more justly detested, than the cruelty that was exercised in the island of Guernsey, of burning a woman big with child; and when, through the violence of the flames, the infant sprung forth at the stake, and was preserved by the bystanders, after some deliberation of the priests who assisted at the sacrifice, they cast it again into the fire as a young heretic, —a barbarity which they never learned from the laws of ancient Rome, which directs, with the same humanity as our own, '*quod pregnantis mulieris damnatæ pœna differatur, quoad pariet,*' which doctrine has also prevailed in England, as early as the first memorials of our law will reach. In case this plea be made in stay of execution, the judge must direct a jury of twelve matrons or discreet women to inquire into the fact; and if they bring in their verdict *quick with child* (for barely *with child*, unless it be alive in the womb, is not sufficient) execution shall be staid generally till the next session; and so from session to session, till either she is delivered, or proves, by the course of nature, not to have been with child at all. But if she once hath had the benefit of this reprieve, and hath been delivered, and afterwards becomes pregnant again, she shall not be entitled to the benefit of a farther respite for that cause. For she

now may be executed before the child is quick in the womb, and shall not by her own incontinence evade the sentence of justice."—*Blackstone*, v. 4, p. 394.

This, gentlemen, is the law of the land, which is not only at variance with itself, but also violates the law of nature. Fonblanque justly observes, " it is a strange anomaly that by the law of real property, an infant *in ventre sa mère*, may take an estate from the moment of its conception, and yet be hanged four months afterwards for the crime of its mother."—(*Paris and Fonblanque*, v. 3, p. 141.) The editor of Blackstone remarks in the second case, that, " as the execution of the law in the first instance is respited, not from a regard for the mother, but from tenderness towards the innocent infant; if, then, it should happen, she becomes quick of a second child, this surely is as much an object of compassion and humanity as the first."

There are numerous instances on record of pregnant women having been executed, even after being examined; consequently a medical man, when called on for his opinion, should for his own sake, as well as for the sake of justice, deliver it with cautious reserve, on account of the uncertainty of the symptoms of pregnancy, especially during the first months. For this reason, as well as by reason of endangering the life of the child in consequence of the agitation attendant on trial, it has been wisely ordered by the laws of France, that a woman accused of a capital crime should not be brought to trial until it was ascertained that she was not pregnant. And this ought to be equally as important in point of law as it is in point of fact. For the fact is, that a woman is *quick* with child from the very moment of conception, the difference merely proceeding from the position of the uterus, and not from any new or distinct period in the existence of the fœtus. Previous to what is vulgarly termed " *quickening*' the uterus is contained within the basin or cavity of the pelvis; at the period of quickening which usually takes place about the fourth month, but sometimes much sooner and sometimes later, the uterus, from its increased size, rises above the brim of this pelvis. Should this take place suddenly, the removal of pressure from the larger vessels may produce syncope, and the change of the position of the fœtus may cause its motions to be felt. But the fœtus does not at the period of " quickening" receive vitality, or from a lifeless lump become a human being. The embryo became quick when conception took place. It is an error of law which it is to be hoped will be no longer admitted in courts of justice, that the innocent fruit of the womb should perish with its guilty parent, merely because it happens to be a month or two younger than the time prescribed by law for saving its life.

Another important point for our consideration is the natural period of gestation, and for how long it may be protracted, and to what extent it may be shortened, compatible with the life or " *viability*" of the offspring.

These subjects are passed over in silence by the laws of England. " The Roman law establishes, upon the authority of Hippocrates, that an infant may be born *six months and two days* after conception; but a second law requires an interval of *seven* months between the conception and delivery. This discrepancy arises from the confusion of lunar and solar months."—*Fonblanque.*

The usual period of pregnancy is 280 days, which is 40 weeks, or 9 calendar months and 10 days" By the law of France a child born within 180 days, or about 6 months after marriage, and 300 days, or about 10 months, after the dissolution of marriage, is considered illegitimate." " By the law of Scotland a child born *six* months after the marriage of the mother, or *ten* months after the death of the father, is considered as legitimate."—*Fonblanque.*

The period especially to which gestation may be protracted has ever been a favourite subject among legal casuists, and by some has been protracted to an incredible length. Dr. Hamilton remarks that if the character of the mother be unexceptionable, a favourable report ought to be given, though the child should not be produced till *nearly* ten calendar months after the absence or sudden death of her husband. Dr. Gordon Smith states that it is admitted a woman may carry a child to the *eleventh* month. Some authors deny that any determinate period is assigned for the duration of human pregnancy.

Dr. Mason Good says, that twelve months is a term allowed by many physicians, as what may take place under peculiar weakness or delicacy of health. But, observes Good, it is most probable that in all these the mother is mistaken as to the proper time of her conception, and imagines herself to have commenced pregnancy for some weeks or even months before it actually takes place. Haller gives references to women who are said to have gone not only ten, but eleven, twelve, thirteen, and even fourteen months.

We read in Aulus Gellius of an edict by the Emperor Adrian in favour of a woman of irreproachable character, who was delivered eleven months after the decease of her husband; and the parliament of Paris, in the case of a widow, decided in favour of the legitimacy of an infant born in the fourteenth month of pregnancy. Bartholin relates the case of a young woman at Leipsic, who was delivered in the sixteenth month; and, if we may credit it, the account would appear as unexceptionable as any case on record, for, during her pregnancy she was in custody by order of the magistrates. In the Histoire de l'Académie des Sciences, there is a case gravely reported of a living child, born after what is said to have been three years of pregnancy.

Many of these cases of protracted preg-

nancy may have been dated from the last menstrual period. Sir Everard Home relates the case of a young woman, who was married before she was seventeen, and although she had never menstruated, she became pregnant; four months after her delivery she became pregnant a second time, and four months after the second delivery she was a third time pregnant but miscarried; after this she menstruated for the first time, and continued to do so for several periods, and again became pregnant. Now it might so happen that a woman for a time might cease to menstruate, which disordered state of the organs of generation might be attended with loss of appetite, nausea, vomiting, and many other symptoms common to pregnancy, so as to induce error respecting her condition; upon recovering her health, impregnation might take place previous to the reappearance of the catamenia. In such a case she would naturally date her pregnancy from about the last period.

The shortest period of gestation, compatible with the life of the offspring, appears from the laws of France and of Scotland to be about six months. Dr. Mason Good observes, "there can be no doubt that a considerable difference in duration may ensue from the state of the mother's health; for, as the fœtus receives its nourishment from the mother, there is a probability that various deviations from health may retard the maturity of the fœtus. And it is probably on this account that different legislators have assigned different periods of legitimacy; one of the shortest of which is that determined upon by the faculty at Leipsic, who have been complaisant enough to decide that a child born five months and eight days after the return of the husband, may be considered as legitimate, and that a fœtus at five months is often a perfect and healthy child.

Symptoms of Pregnancy.—My colleague, who fills the chair of midwifery, will inform you of the difficulty and uncertainty of distinguishing the symptoms of pregnancy, for there are many diseases which assume the appearance of this condition, such, for instance, as molaris polypus uteri, tympanitis, different kinds of dropsy, suppression of the menses, induration of liver and spleen. In addition to this, pregnancy may be uterine or extra-uterine. It may be simple, complicated, or compound, each of which causes increases the difficulty of the diagnosis.

But as pregnancy may be *concealed*, in order to avoid disgrace, or with a view to destroy the offspring, either by procuring abortion or by other means; and as it may also be *pretended*, either to gratify the wishes of the husband, or to deprive the legal successor of his just claims, to extort money, or to delay the execution of punishment, it often becomes a subject of judicial inquiry, and one on which the medical jurist must decide.

The symptoms of pregnancy may be arranged under three heads; 1st, such as amount to presumptive proof; 2nd, such as render it probable; and, 3rd, such as amount to positive proof.

1st. The sympathy which exists between the uterus and the stomach, as loss of appetite, nausea, vomiting, and longings or depraved appetite. The vomiting generally takes place in the morning or after meals, and is often accompanied with headach, drowsiness, and a slight degree of fever. The menses are suppressed, but in some rare cases they continue during the whole period of pregnancy, and there is not unfrequently a slight discharge during the first months. The breasts swell, the veins become larger, and the nipples are surrounded by a dark areola, and are more sensible; the countenance becomes altered, the eyes appearing larger and the mouth wider; the nose and all the features acquire a peculiar sharpness; the sleep is frequently broken, and the temper irritable; sometimes it is accompanied with toothache and other anomalous symptoms, as cardialgia, dyspepsia, dyspnœa, diarrhœa, constipation, and sometimes convulsions. The blood is frequently sizy, but the crassamentum is not dense, firm, with a buffy coat and depressed in the middle, but of a softer texture, of a yellow and more oily appearance. As pregnancy advances the navel becomes prominent, and the inferior extremities œdematous.

2nd. The stethoscope is a valuable instrument to ascertain the existence of pregnancy after the ascent of the uterus, or even by applying the ear to the abdomen the throbbing of the heart of the fœtus may be heard, and it is easily distinguished from the pulsations of the mother by its rapidity; for the pulse of the fœtus is from 120 to 160 in a minute, whilst that of the mother, which proceeds from the insertion of the placenta, is isochronous with the wrist.

Also, by introducing the index of the right hand per vaginam, and pressing the left hand on the abdomen, the form and size of the uterus, and the existence of the fœtus may be ascertained. Dr. Paris recommends the following method, as proposed by Tortose:—"The woman being fasting, and her bowels and bladder having been previously evacuated, should be directed to lie down, with the loins low, and with the head and buttocks elevated; the knees are then to be raised and bent, so as to bring the thighs to the belly, and the heels to the buttocks, by which position the abdominal integuments will be relaxed; the midwife is then to place the hand upon the epigastric region in such a manner that the little finger may rest on the pubes, and the thumb on the navel, and, ordering the woman to breathe hard, he must press the belly gently during the expiration; if the uterus be gravid, and is more than three months advanced, he will at this moment feel above the pubes an

equal, hard, globular body; and if the same examination be made after the fifth month of gestation, he will probably feel at the same time the motions of the fœtus; but, in cases where no tumour can be distinctly felt, the operator must be very careful not to be deceived by motion, for the action of flatus may mislead him, and even where an obvious enlargement exists, the pulsations of the aorta may lend to it a deceptive motion; this is particularly striking where the ovarium is extensively diseased, or the uterus is distended with tumours, an occurrence which has not unfrequently induced the patient to consider herself pregnant, as happened with Johanna Southcote; in such a case the ovarium may be felt through the parietes of the abdomen, sometimes pretty high, like the uterus, or like a prominent part of a child, but the round and circumscribed nature of the tumour can never deceive an experienced midwife."—*Paris and Fonblanque*, v. i. p. 236.

Pregnancy is said to be compound when two or more fœtuses co-exist in utero; the only judicial question, which can arise in such a case, is to ascertain the order of conception, of which we will treat when speaking of superfœtation.

Pregnancy may also be complicated with uterine disease, as with the presence of hydatids, or with a polypus or a mole; and there are cases on record, where women have been sacrificed on such occasions by the mistaken application of the trocar.

Molar concretions, polypi, and hydatids frequently assume so much of the character of genuine impregnation as to be distinguished with considerable difficulty. In general, however, the abdominal swelling, for the first three months, increases far more rapidly than in real pregnancy, after which it keeps nearly at a stand; the tumour, moreover, is considerably more equable, the breasts are flat, and do not participate in the action, and there is no sense of quickening. There is almost always a retention of the menses."—*Mason Good.*

Some authors distinguish moles into true and false. According to them, true moles consist of the remains of an incomplete conception, varying according to the age of the embryo, and the time it has remained in utero. False moles are foreign bodies, consisting of concrete clots of blood, which not unfrequently assume a fibrous structure, and are in some measure vascular; sometimes they consist of concentric layers, generally fill the cavity of the uterus, and vary, according to circumstances, both in colour and in consistence.

Hydatids may be mistaken for pregnancy. Many physiologists suppose them to be the consequence of conception, that they proceed from the disorganisation of the ovum and placenta. This might be the case if they were confined to the female organs of generation; but they are found in almost every other part of the body, and in both sexes.

Even the appearance of milk may be unattended with pregnancy. Friction and suction will sometimes produce it. Bellor relates the case of a servant girl who slept in a room with a child which disturbed her by its cries. She imagined that by putting it to her breasts it might be quieted. In a short time she had milk sufficient to supply its wants. Many such cases are on record. Sir Hans Sloane gives an account of a woman, at the age of sixty-eight, who had not borne a child for more than twenty years, nursing her grandchildren one after another. Milk is often secreted immediately after the cessation of the menses. Another case is related of a lady who had not borne a child for fourteen years, and ever since that period her breasts had regularly secreted milk in great abundance, so that she could at all times easily perform the office of a nurse. She uniformly enjoyed good health, was about thirty-five years of age, and had never been pregnant a second time, nor had any return of her menses. Even men are reported to have suckled children, and the case stated by the celebrated Humboldt should not be forgotten, of the North American Indian, who saved his child from starvation by applying it to his nipple, the breast secreted milk, and continued permanently enlarged. Indeed, I myself knew a case of a pointer dog, which was in the habit of sucking one of his teats, and by such practice had so increased the size of it, that it appeared like the dug of a bitch that had pups.

The suppression of the menses, notwithstanding the high authority of Dr. Denman, is by no means an invariable criterion. Heberden knew a female who never ceased to have regular returns of the menses during four pregnancies quite to the time of her delivery. Deventer mentions one who had become pregnant before menstruating, and, immediately after conception, this discharge returned periodically until her delivery, and this was the case during several successive pregnancies, inverting, as it were, the usual order of nature.

From what has been said, we may deduce the following conclusions:

1st. From the moment of conception to the end of the second month there is not a single symptom which authorises us to affirm the existence of pregnancy, and can only warrant us in presuming the probability of its existence.

2nd. During the third month the woman having been again examined per vaginam, the probability is strengthened, if combined with additional symptoms.

3rd. During the fourth month the probability is increased, but not sufficiently to take on ourselves the responsibility of positively affirming the existence of pregnancy. For notwithstanding the woman and the medical man may both be convinced that the motions

resemble those of a fœtus, yet spasms of the intestines or of the womb itself may, in false conception, or in case of a mole, put on the appearance of these motions, and sometimes no such motions take place during the entire course of pregnancy.

4th. During the fifth month the probability is not greatly increased, unless, in addition to the other symptoms, the motion of the fœtus is distinctly perceived, and the pulsation of the heart distinguished either by applying the ear to the abdomen of the woman, or, what is preferable, by making use of the stethoscope; but these pulsations are seldom perceived before the sixth month.

5th. During the sixth month, if the stethoscope is of no avail, we must rely on the *touch;* the *fundus uteri* will have risen to near the navel, the neck will be larger and softer, and the motions of the fœtus more easily ascertained.

6th. During the last three months the position of the head of the fœtus and of the uterus, the state of the neck and of the membranes, are the symptoms which principally merit our attention. But, after all, they are insufficient to establish the existence of pregnancy, and will only justify us in asserting the great probability of its existence. But if the progress of the symptoms has been gradual, and towards the latter stages the *pulsation* of the fœtus can be ascertained, together with its position in utero, we may then affirm the existence of pregnancy. But where there is the possibility of a doubt, it is better to suspend our judgment, especially where the character, life, or property of a fellow being is at stake, and the delay of a short time must clear up all doubt or mystery; and in every case the woman ought to have the benefit of the doubt. Thus, the possibility of pregnancy should be admitted, when the lives of the mother and of the fœtus are in question; and the possibility of the reverse, if, by the absence of pregnancy, any advantage may be obtained, or disgrace avoided.

7th. It ought not to be forgotten, that when a woman feigns pregnancy she may have recourse to artificial means to increase the size of the abdomen, such as napkins, cushions, or such like; also that she would remove the linen, or wash out the stains which might verify the presence of menstruation; and, in general, they endeavour to appear more advanced than in reality they ought to be. If a woman wishes to conceal her pregnancy, she pretends to have one of those diseases which resembles it, endeavours, by means of her dress and bandages, to diminish the size of the abdomen, and will stain her linen to imitate menstruation.

On this subject it is further to be observed, that a woman may conceive without being conscious of the act, and may go the full term without being conscious of pregnancy.

1st. Conception may take place without consciousness, either while under the influence of stupefying drugs, or whilst in a state of asphyxia, of which we shall hereafter have occasion to speak.

2nd. There are many cases on record of women going the full time of gestation without being conscious of it. Desgranges relates such a case of a woman, who was forty-five years of age, and the mother of several children. Foderé mentions several: one where he was called in, the woman labouring at the time under phthisis pulmonalis and fluor albus. M. Duquesnel reports another case of a married lady, who could have had no motive to conceal her pregnancy. But these and many other cases, especially those of unmarried women, may be attributed either to the presence of disease accompanied with similar symptoms, or to that confidence which may arise from using means to prevent conception; for we readily believe what we wish to believe; and either case would divert the attention and produce delusion. But, independent of the catamenia, it is highly improbable that a woman should go the full time of gestation, even to the very moment of parturition, without ever having experienced any of those symptoms which usually are concomitant on such a state. Therefore, in all cases of suspected pregnancy, the medical man ought to inquire, whether *she had never exposed herself to become pregnant?* and then, from the circumstances of the case, to form his opinion.

3rd. There are several cases on record, that a woman may be delivered without being conscious of it. As this is a question of much importance in cases of infanticide, we shall bestow on it all due consideration under the head of Delivery.

Superfetation is where a second conception takes place after a woman has already become pregnant. In treating on this subject, we tread on debatable ground. It has been much agitated, has greatly exercised the ingenuity of some, whilst it is totally denied by others. Perhaps in this case, as in many others, the truth lies somewhere between the disputants, and that both are partly right and both partly wrong. Those who assert it, triumphantly bring forward Buffon's celebrated case, wherein it is stated, that "a female at Charleston, in South Carolina, was delivered, in 1714, of twins within a very short time of each other. One was found to be black and the other white. This variety of colour led to an investigation, and the female confessed, that, on a particular day, immediately after her husband had left his bed, a negro entered her room, and, by threatening to murder her if she did not consent, had connexion with her." Another instance is related by Dr. Mosely, where a negro woman in Jamaica brought forth two children at a birth, both of a size, one of which was a negro and the other a mulatto. On being interrogated, she said, that she perfectly well knew the cause of it, which was, that a white man, belonging to the estate, came to her bed one morning, before she was up, and

she suffered his embraces, almost instantly after her black husband had quitted her." Another negress, of Guadaloupe, having received, during the same evening, the embraces of a white and of a black, was, in due course of time, delivered of two male children, one a black and the other a mulatto.

Another negress was put to bed of three children, of which one was a mulatto, the second a black, and the third piebald. Zacchias relates the case of a lady, whose husband had lost his life in a quarrel; eight months after his death she was delivered of a deformed child, which died in the birth. Her abdomen remained large. One month and a day thereafter the widow was again taken in labour, and brought forth a perfect living child.

Dr. Denman makes mention of a case where "the female went to the ninth month of pregnancy; but, between the fifth and sixth, she met with a great fright, which affected her severely, and diminished her size. On the 11th of February she was delivered of a healthy child, but continued in pain, and it was not until the morning of the 25th that she was relieved. On that day there was born the head and parts of a child, that had just the appearance of a miscarriage of four months.

In Dr. Maton's case, the lady was delivered of a male child, which had every appearance of health, on the 12th Nov. 1807. It was brought forth under distressing circumstances, and survived only nine days. On the 2nd of February, 1808, (not quite three calendar months from the preceding accouchement,) she was delivered of another male infant, completely formed, and apparently in good health."

The most remarkable case is that related by Foderé, where the wife of Raymond Villard, of Lyons, became pregnant, but had an abortion at the seventh month, on the 20th May, 1779. She conceived again within a month, and on the 20th of January, 1780, eight months after her delivery, and seven months from her second conception, she brought forth a living child. This delivery was not however accompanied with the usual symptoms; no milk appeared; the lochia were wanting; and the abdomen did not diminish in size.

Upon this a consultation took place, in which there was much difference of opinion. However, three weeks after her delivery, she felt the motion of the fœtus, and, on the 6th of July, 1780 (five months and sixteen days after the first birth), she was again delivered of another living daughter. The milk now appeared, and she was enabled to nurse her offspring.

Maria Anne Bigaud, of Strasbourg, thirty-seven years of age, was delivered on the 30th of April, 1748, of a male child (*viable*) capable of living; the lochial discharge stopped shortly afterwards, and the breasts ceased to secrete milk. On the 17th of September, in the same year, she was put to bed of a living daughter, which, from its development, was considered at full time; thus there was an interval of four months and a half between the two children. This woman died in 1755, and Ewenman, who opened the body, discovered nothing peculiar, or irregular, in the conformation.

From the above cases, M. Foderé is of opinion, that the period, when superfœtation may take place without injury to the existing fœtus, is between the fourth and the sixth months. La Glosse, on the contrary, limits the period to forty days after conception. Zacchias protracts the term to the sixtieth day. Hippocrates was of opinion, that the second infant could not be conceived beyond six or seven days after the first conception.

The arguments in favour of superfœtation are, 1st. That the os tincæ, or mouth of the uterus, is not closed immediately after conception, and sometimes remains open during the entire period of gestation. 2nd. That it is not necessary the semen masculinum should pass into the uterus and along the fallopian tubes, but that impregnation may take place by the aura seminalis. 3rd. That, in superfœtation, there are separate placentæ and separate membranes, whilst in cases of twins there is *generally* but one placenta. 4th. That some women have a double uterus and sometimes a double vagina, and that, in such cases, it is easy to conceive impregnation may take place at different periods. 5th. That in some menstruation continues during gestation.

Marquet relates the case of a woman, aged 48 years, who died of pulmonary consumption, in whom there was found a double uterus, resembling two pears reversed, united by their neck, terminating in an anterior opening common to both.

To these arguments it is objected, 1st. That impregnation is proved never to take place by the aura seminalis, and only by the actual contact of the semen masculinum with the embryotic ovulum. 2nd. That twins sometimes have separate membranes and placentæ. 3rd. That a woman with a divided, or double, uterus is not more prolific than others, and there is even no authenticated case of twins in such women. 4th. That each case of superfœtation is a case of twins, and where a distance of time intervenes the one is a premature birth, and the other a retarded one, which may proceed either from the effects of fright, or from a diseased state of the organs, or from the enfeebled health of the mother, or from a greater or less combination of these causes. 5th. Notwithstanding the mouth of the uterus should remain open, yet the membrana decidua, which is formed almost immediately after conception, lines the parietes of the cavity of the uterus, and obstructs the openings in such a manner as to cut off all communication between the vagina and the ovaria.

These and many other such like arguments, pro and con, have been used by the advocates on either side. In addition to Buffon's celebrated case and those of the negresses, they

adduce that of a mare, covered on the same day by a horse and an ass, which brought forth a colt and a mule.

That such cases have occurred does not admit of a doubt, and I think we need not have recourse to such rare and far-fetched cases, either to prove the fact, or to explain the modus operandi, the way in which it takes place.

Cases of superfœtation are of daily occurrence in the canine species. A bitch, whilst in heat, may be lined by several dogs, and will bring forth pups more or less resembling each of them.

Thus, in the bitch, or in the woman, during the spastic excitement and ardor of the organs of generation, there is nothing to prevent super-conception from taking place, so long as that state of the organs continues to endure, but when the excitement is over, when the appetency of the parts for the semen masculinum has ceased (which may not take place for some time after coitus and impregnation), when the spasmodic orgasm no longer exists, when the physical wants are satisfied, and the impregnated ovulum has burst its covering, and fallen into the fallopian tubes, it does not appear to me that further impregnation either can, or ever does, take place. It must be borne in memory, that impregnation does not depend on the prurient lasciviousness of the mind, on the voluptuous sensations of sexual intercourse, or yet upon the absence of venereal desire, or the perfect apathy, or even disgust, with which the caresses of the male are received, but upon the condition of the parts,—the consent of nature. I might enlarge on this subject, and offer reasons why *super-conception* should rather take place after intercourse with different individuals than on the repeated *coitus* of the same individual, producing twins with separate placentæ, but I think I have said quite sufficient, and will therefore dismiss it for the chairs of physiology or midwifery to treat more fully.

Reviews.

A Treatise on Dropsy, exhibiting its Nature, Causes, Forms, Symptoms, Principles of Treatment, and Practical Application of them in the Use of the various Remedies employed for its Cure. By James Ford, M.D., Andover. Simpkin and Marshall. 8vo. pp. 57. 1834.

Dropsy is a malady of such frequent occurrence, that it is of the greatest importance every medical man should make himself acquainted not only with the best methods of treating its various forms, but should also endeavour to ascertain the cause, or the causes, which may have induced it; endeavour to trace it to its source, to the pathological conditions of the neighbouring organs, or to the state of the fluids of the body, or to organs, though remotely situated, which may be the probable cause. We know, for example, that hydrothorax ensues on an attack of pleuritis, ascites on inflammation of the peritoneum, anasarca on diseased kidneys, but we know with equal certainty, that dropsy may occur without such precursory affections. Dr. Marshall Hall has shown most indisputably, that hydrocephalus may and does arise, in the absence of arachnitis, and that, in such cases in children, the cause is a diminished quantity of blood in the cranial cavity. Kelly, in his experiments on physiology, demonstrated the proof of this fact. Dogs, that had been bled freely and repeatedly, presented after death, in the ventricles of the brain, a watery fluid, so that two conditions of the system, of a totally opposite character, may produce dropsy.

Let us now proceed to give a brief analysis of Dr. Ford's treatise.

After giving some detailed remarks on the various opinions entertained as to the cause of dropsical effusion, such as the curious but common notion of dropsy being the effect of a loss of balance between the exhalant and absorbent systems, debility, organic disease, and increased tone of the vascular system; we next meet with an enumeration of the various symptoms of hydrothorax, and a lengthened discussion on the diagnostics between this disease and angina pectoris. Dr. Ford has drawn the line of distinction between these two diseases as accurately as the limited means he employed could enable him. The symptoms, which come under the observation of the eye, are clearly delineated, they do much credit to the author's observation; but if he had resorted to one, and the only method of arriving at a correct knowledge of thoracic diseases, viz. the stethoscope, he might have saved himself much labour in writing his elaborate details of signs. We find nothing more than a simple reference made to the use of this invaluable instrument. When speaking of the diagnosis of hydrothorax, he states at page 18, "auscultation is another method proposed for ascertaining the presence of hydropic effusion in the chest," the author refers to percussion, shaking the body, &c., and concludes,

"but it is to be feared that none of these devices are of great value, or much to be depended on." We would humbly recommend the author to peruse a book prior to bringing out a second edition of his own,—we mean the immortal treatise of Laennec*. He will there find those positive and almost unerring signs which every intelligent practitioner at the present day regards as a *sine quâ non*, and which Dr. Ford's work is so lamentably deficient in. The following signs indicate to the stethoscopist the existence of hydrothorax. "The chief and almost only symptom of this disease is the impeded respiration. Percussion affords the dead sound, and the stethoscope indicates the absence of respiration every where except at the roots of the lung." These are tangible marks. In the first edition of Laennec, the author suspected œgophony to be one of the characteristics of hydrothorax, and subsequent experience proved the correctness of his supposition, and this appears in the last edition. Had Dr. Ford, we repeat again, been acquainted with the use of the stethoscope, he would have had no difficulty in distinguishing hydrothorax from angina pectoris. Only two other forms of dropsy are discussed, viz.—ascites and anasarca; so that the title of the work is incorrect, it should have been—"Remarks on Hydrothorax, Ascites, and Anasarca." In the treatment of dropsy, squill, digitalis, and mercury are regarded by the author as the chief agents. Digitalis is recommended in the form of powder in the dose of "half a grain or a grain" three or four times a-day. Instead of gradually increasing the dose, it is suggested that the same dose should be continued until diuresis is produced.

Dr. Forbes, in his translation of Laennec, recommends the infusion in symptomatic hydrothorax, which, he says, is almost a specific in removing the fluid. At page 453 are the following observations:—"The best form of administering digitalis is that of infusion, in doses of half an ounce every eight or six hours, and continued until it has increased the flow of urine, or otherwise manifested its specific effects upon the pulse or general system." This remedy is most effective in cases of great debility. When disease of the heart is present, Dr. Forbes states that "venesection is almost always proper." This latter remedy Dr. Ford does not hold in much estimation. He states, that "that state of system which is adapted to blood-letting is confessedly rare in dropsical diseases." Here we beg leave to differ from the Doctor; our own experience, and the testimony of many celebrated English as well as continental physicians, are at variance with him. We need refer only to the works of Laennec and Blackall, to prove, that dropsy, in the majority of instances, is the result of inflammatory action, and requires bleeding to subdue it. The author concludes his work on dropsy, by the following judicious but not very satisfactory remarks. "Sometimes one plan will answer better, sometimes another, and sometimes a combination of methods may be advisable and proper." From the observations we have made, it must be obvious that Dr. Ford has advanced nothing new, either in respect to the causes, the pathological condition of the effused fluid, or in the treatment. Still the book is worthy of perusal; it contains many good practical hints. Once more we recommend the author, before he writes again on any pectoral affection, to study the stethoscope.

* Laennec on the Diseases of the Chest. Fourth edition. By Forbes.

The British Dissector. Part I. By Malcolm W. Hilles, Lecturer on Anatomy and Physiology in the Medical School, Marlborough-street. Shaw, Dublin, and Renshaw, London.

When a judicious man writes a book, he has usually one of the four following objects in view,—to advance something original in the form of matter, or to give a more lucid exposition of the subject upon which he treats, or to render a service to his fellow men, or to enhance his own reputation. Not one of these objects will be accomplished by the author of the British Dissector. Descriptive anatomy requires but common industry to be learned. It is taught by a lecturer in the theatre, or by the student's own exertions in the dissecting-room with the assistance of his teacher, and a work that gives a concise description of the various parts of the mechanism of the animal body; but it is of great importance that the book which is to be his

partial guide in the absence of the teacher, should be clear in its descriptions, methodical in its arrangement, but highly paramount to all that its descriptions should be accurate. Not one of these objects is effected by "Part I." of the "British Dissector." The diction is inelegant, and there is an attempt to introduce new names, at all times objectionable, unless they have the very superior advantage of conveying a more correct idea of position or character of parts. Here Mr. Hilles is peculiarly unhappy; he would make confused what appears to the tyro in anatomy complex. Of his arrangement in description, it will suffice for us to say that it is faulty,—there is a want of method pervading the whole of this part, a quality, in such a work, for which nothing could compensate. Let us see if the author in any way compensates for the objections we have advanced. We state that the descriptions should be accurate. At page 4, we have the following,—"the irregular bones are situated where great strength and considerable motion are required." In this division are of course included the bones of the face, those of the tarsus and carpus. We need not inform our readers, it would be an insult to their understandings, that these bones are so compacted that they shall be motionless, or nearly so. This is one glaring error,—such an error as might cause the rejection of a pupil at the college, no trifling circumstance to him. In the same page we have another error, equally, if not more, unpardonable.—"Nerves cannot be traced into them" (bones). Mr. Shaw and many others have demonstrated them as palpably as we can expose the biceps muscle. At page 5, when giving the component parts of the joints, he states that, "when immoveable, they are composed merely of bones and ligaments, or some substance resembling those in office, as in the articulations of the bones of the head, face, pelvis, &c." Does Mr. Hilles forget, or does he know, that a quantity of fibro-cartilage is interposed between the bones in these regions, a structure not "resembling" bones or ligaments in "office," but possessing a property widely different, and which is equally dissimilar "in office." When speaking of the mechanism of cartilage covering the extremities of bone, he says, it "is composed of fibres taking different directions, but principally in an *oblique* direction towards the bone." Beclard, and other celebrated anatomists, affirm that these fibres are *perpendicular;* this is easily shown by maceration. There is a sentence in page 6 we feel a strong disposition to quote, but it must be a *gross* error of the press,—such things will happen.

A serous membrane, he says, "presents a smooth, polished appearance, is transparent, *destitute* of red vessels and *nerves,* at least in a *healthy state.*" The *italics* are ours. The pupil is to infer, of course—nay, it is plain—that nerves, as well as red vessels may be developed in those membranes when in a state of disease. Again, he states—"The connexion between the *scapula* and *trunk,* and that of the *os hyoides* is called *sycarcosis,* but cannot be classed among articulations." By the connexion between the scapula and trunk, we presume he means the union of the acromion process of the scapula with the clavicle, or of the clavicle with the sternum; there are no other connexions except through the medium of muscle. *We* were taught that these latter were articulations, and came under the class "*diarthrosis*"—were *bonâ fide* articulations.

It would occupy even pages to notice all the inaccuracies in this *Part;* the preceding will suffice to prove that the British Dissector, if the author continue its publication, will never supersede the works already extant on the same subject, nor could it even obtain for the author the slightest reputation, but would, on the contrary, and we say it with reluctance, unquestionably prevent his acquiring the reputation of an anatomist.

Dublin Journal of Medical and Chemical Science. November, 1834.

We are glad to find that our Dublin contemporary continues to be conducted with so much spirit and judgment. The present number contains some valuable original communications, from which we shall notice one upon *erysipelas,* and another on *transverse malposition of the head as a cause of difficult labour.* The first paper is a rather lengthy one, upon erysipelas, from the pen of Dr. M'Dowel, one of the surgeons to the Richmond Hospital, and is entitled, "Observations on Erysipelas," but might with

propriety have been denominated, a Report of an Epidemic Erysipelas as it appeared at the Richmond Hospital; and we may take this opportunity of remarking how useful it would be were physicians and surgeons in charge of large hospitals to publish, from time to time, similar reports on particular diseases as observed in their respective hospitals. The following abstract will show the object of this essay.

Erysipelas he divides into three classes. In the first, the inflammation was often of a phlegmonous character; in others, the skin alone was affected. In the second class of cases the redness was more diffused, at the same time, irregularly, intermediate portions of skin being often free from the affection; vesications occurred more frequently; it was found in those of a debilitated habit, in whom were marks of gastro-hepatic derangement, and considerable constitutional disturbance.

Sub-cutaneous abscesses formed, which required to be opened early to prevent destruction of the cellular tissue. These purulent defects seem to have existed without decided marks of their presence.

One case is mentioned, succeeding ptyalism, where the indications of disease were very slight during life, and yet, after death, there was an extensive puriform infiltration about the trachea, thyroid gland, and œsophagus. Matter was found behind the pharynx also, which, he supposes, might have spread, not from the skin, but from the mucous membrane of the pharynx.

The third class was found in those altogether destitute of the *vis vitæ* from intemperance, or organic disease, and who speedily sunk, unless supported by stimulants. There were less redness and heat of surface, the appearance being more that of erythema; the pulse was quick and weak, and the fever of a typhoid type; the stomach was much deranged, as was evinced by the state of the tongue, which was loaded, of a dry red or brown colour, and scabrous near its apex.

There are some judicious remarks on the treatment of erysipelas. The author speaks very favourably of the plan of mercurial inunction, both from his own experience and from that of Mr. Read, of Mercer's Hospital, and recommends that "this plan be more extensively adopted than it has hitherto been, in this country."

Several cases are subjoined, illustrative of the varieties of the epidemic erysipelas, and the efficacy of various plans of treatment.

Dr. Montgomery has given a short but practical paper on Malposition of the Head, as a cause of difficult labour.

After observing that, occasionally, the apparently natural progress of labour becomes suddenly arrested, the head becoming stationary in the cavity of the pelvis, without the existence of any deficiency of space, he suggests that a peculiar transverse malposition is occasionally the cause of it. The head enters the pelvis with its long axis in coincidence with the oblique diameter of that cavity, and the chin pressing closely on the chest, the vertex descends so as to press upon the soft parts forming the floor of the pelvis; the occiput then advances towards the arch of the pelvis, and issues from it as the chin recedes from the chest; thus the head escapes, revolving, as it were, under the anterior wall of the pelvis, and occupying throughout its passage the least possible dimensions, the departure of the chin from the chest, which requires greater accommodation, not taking place until the occiput, having cleared the pelvis, has unlimited space to allow its escape. But, occasionally, the arrest of the head takes place when, after entering the pelvis as described, the occiput recedes instead of moving forwards, and the head becomes placed in a most unfavourable manner, with respect to the outlet, on the chin receding from the chest; for the greatest possible dimensions it is capable of assuming are presented, and the two extremities of the long diameter rest on the tuberosities of the ischia, while the os parietale is closely applied against the lower part of the sacrum and the coccyx, rendering the action of the uterus incapable of effecting delivery. On examination, we find the anterior fontanelle in the centre of the presentation, and the head closely fixed at the three points we have named.

The necessary rectification of the head is thus effected. Apply two fingers along the coronal suture, and, *in the absence of pain*, press up the forehead, and push it backwards towards the sacrum, and there retain it till the next pain, which will, in general, complete the rectification, and the delivery is speedily accomplished. If, during the descent of the

head, a tendency to this malposition be observed, we must endeavour to prevent its occurrence by adopting the means already pointed out as suited for its correction.

Two cases are narrated by Dr. Montgomery: in one, the head was distending the perinæum, and apparently on the point of being born after twenty-four hours' labour, when, despite of the active contractions of the uterus, and the perfect relaxation of the soft parts, it remained in that situation fifteen hours. Dr. Montgomery was called in, and by the manipulations above described, immediately effected the delivery. The second case is precisely similar, but the action of the uterus was resisted only for four hours, the means of rectification having been adopted at an earlier period. This paper purports to be the first of a series of "Practical Observations" from a very practical writer and acute observer.

A Compendium of Pharmacy, explanatory of the Chemical Decompositions of the Pharmacopœia Londinensis. Illustrated by new and comprehensive Diagrams. By William Meade, M. R. C. S., Private Teacher of Medicine and Surgery. pp. 147. 1834. Jackson.

Perhaps there are no books which present so little attraction to the medical reader as those which treat upon the subjects that the present curriculum of study imposes upon a candidate for the diploma of the Apothecaries' Company. A student may attend lectures on the various branches of medicine year after year, may be thoroughly versed in the great principles of science, may know more of the scientific and theoretical parts of physiology, of chemistry, and of the modus operandi of medicinal agents, probably than his examiners, but, from some cause or other, he is incapable of conveying that knowledge to others. This is a truism, which requires from us no arguments to corroborate. It becomes a question, then, and a serious one to the medical pupil, whether it is not an imperative duty he owes to himself, and also to his friends, to adopt the means which may ensure him a successful issue in his examination before the Apothecaries' Company. The question resolves itself into—What are the means to be adopted? Will a thorough knowledge of the numerous topics which pupils are compelled to study ensure him success?—We believe not: from observation and careful inquiry, we are satisfied that such information will not. A man may be well acquainted with a subject, yet be unable to impart the knowledge he possesses of it, especially, to those whom he regards as his superiors. The cause may be natural diffidence, a quality often associated with talent; or it may arise from a native incapacity to command words for expressing his meaning; but we are inclined to believe that the great fault usually lies in the want of practice. He who has repeated, day after day,—that water consists of oxygen and hydrogen in certain definite proportions, will have the fact so indelibly impressed on his memory, that time alone can efface it. The presence of three or more examiners would not prevent him from stating the circumstance. These observations naturally accrue from the subject before us.

We should infer from the present little work that Mr. Meade is one of a few individuals who possesses those qualities which capacitate him for fulfilling, efficiently, the duties of what is denominated a *grinder*. The subject of pharmacy forms an important part of a student's examination at the Apothecaries' Hall; and we may safely affirm that it is treated upon in a clear, concise, and intelligible manner by Mr. Meade. "A Table of Incompatibles" is judiciously introduced, and is worthy the perusal of practitioners.

Reports of Societies.

LONDON MEDICAL SOCIETY.

Monday, November 3rd, 1834.

Edward Leese, Esq., Vice-President, in the Chair.

Mr. Clifton gave a short account of a case which had recently occurred in his practice. A man, about 40 years of age, in passing through Farringdon-street while the repairs were going on, nearly four years ago, chanced to make a false step, and felt a jar as a consequence. Within a week he discovered that a small tumour, the size of an olive, had formed in the scrotum. This continued progressively to increase, not giving any pain or other inconvenience, except when the system was inordi-

nately excited, and then the tumour would participate in the extraordinary condition of the rest of the body, and increase more rapidly in size. Inconvenience, perhaps amounting to pain, would then be experienced, until the parts could accommodate themselves to the more rapid increase in volume. During all this time, the patient was not confined to the bed. Within the last three weeks, about which time Mr. Clifton was called in, the tumour began to increase more rapidly in size, and to become troublesome. The patient speedily acquiesced in the propriety of removing the diseased mass, which was done by Mr. Kingdon the same day that the case was narrated. Previous to the operation, the exact nature was not ascertained: it was so firmly bound up by the fascia of the perinæum to the raphe of the scrotum, that it was considered to be adherent to the vicinal parts. This was found not to be the case. Adhesions, however, existed between the tumour and the back part of the tunica vaginalis of the right testis, which required very cautious and protracted dissection. The testes were perfectly sound, and consequently were not removed. The hæmorrhage was very great: it was calculated that at least three pounds were lost. Three or four large vessels were divided, in a situation in which they could not be readily got at, and the incision was necessarily enlarged; by doing which, the tension and traction were removed, and the vessels, which before were apparently of the size of crow-quills, contracted, disappeared, and ceased to bleed, giving no further trouble. The whole of the diseased mass was removed. The patient was much exhausted. Previous to examining the tumour, he was conveyed to bed.

The tumour was brought to the rooms for the inspection of the members. It weighed two pounds, six ounces, and presented, in different parts, the characters of scirrhus, fungus, and fungus hæmatodes, the latter predominating.

The case appeared to excite considerable interest, but did not induce any one to make remarks *.

The Chairman consequently called the attention of the gentlemen present to the fact that common bilious fever occasionally becoming typhoid, is a prevalent type of illness at present. In illustration of which Mr. Kingdon related a case.

The captain of a private trader, an athletic man, not of intemperate habits, about six feet two inches high, and who has visited all parts of the globe without being affected by climatorial diseases, arrived about eleven days ago in London, after having travelled for several days previously. He went directly to a boarding-house he used when in town, and complained of being ill. A medical practitioner was sent for, who ascertained that his chief complaint was headach (not fixed pain), with lassitude. This was attributed by the patient to neglecting his bowels for several days, a thing he was unaccustomed to. A strong aperient was prescribed, and the next day he was better, but the feeling of lassitude continued, with an unwillingness to employ himself. In the course of the day after, the pain in the head returned, and he was cupped; the feeling of lassitude continued, and in the night it should seem that some degree of mental confusion occurred, for having occasion to relieve the bowels, he passed their contents on the floor, instead of into the proper utensil. On the fifth day after his arrival in town, Mr. Kingdon was called in, the medical gentleman previously honestly confessing that he could make nothing of the case. When Mr. K. saw him, he complained merely of a sense of confusion in the head, but said he was well, that he was in no pain, and felt perfectly capable of attending to business, but had an unwillingness to engage in it. The pulse was rather irregular; chest perfectly sonorous; breathing rather laboured, but evidently more from deficiency of nervous energy, than from any inflammatory action set up in it. There was not any tenderness upon pressure on the abdomen. The symptoms continued to increase, but without indicating any particular appreciable lesion of organic structure, and the patient expired on the Sunday, six days after Mr. K. first saw him. The impression on the mind of the narrator was, that it was a case of idiopathic typhus fever. No examination was made, as the patient had no relatives in London, and Mr. K. was unwilling to take upon himself the responsibility of making an autopsy without the authority

* The details of the case above given are drawn up from the history furnished by Mr. Clifton and Mr. Kingdon.

of the friends, although he felt exceedingly anxious to open the head and chest.

The opinion of Mr. Kingdon, as to the nature of the complaint, was participated in by Dr. Uwins, Dr. Blicke, and Mr. Headland. Mr. Clifton was of opinion that the disease might be chronic abscess of the brain, and Mr. Dendy thought it possible that there was an apoplectic seizure in the case, and that there was a constant pouring out, a continued instillation of blood from a small vessel. The opinions at present supported by the various parties in the profession were then made the subject of discussion, each theory finding a supporter, but nothing new was elicited.

THE

London Medical and Surgical Journal.

Saturday, November 8, 1834.

PARLIAMENTARY EVIDENCE.

Sir Henry Halford's liberality to the Licentiates of the College of Physicians is too notorious to require from us a single comment; nevertheless we cannot allow the opportunity to pass of expressing our disapprobation, not alone of the conduct he has manifested towards the Licentiates, but also of the conduct of many of the individuals over whom he presides. In the opinion of this very enlightened individual, scholars can be made only at Oxford or Cambridge, physicians must be found "elsewhere." We are as fully convinced as Sir Henry Halford is, that a good preliminary education, a thorough tutorage of the intellectual powers, and a well disciplined cultivation of the moral feelings are highly essential to the formation of a good and respectable physician; but we are not so fanatical as to suppose, that *these* qualities cannot be acquired *elsewhere*. Paramount to all, in the character of a physician, is, that he should be acquainted with every branch of his profession, that in each department he should be entirely versed, and possess a knowledge of the collateral sciences; these qualities are of more service at the bed-side of a patient, and more available in the closet, than all the Greek and Latin which can be learned at the Univerities.

The cause, which he assigns, for not admitting a larger number of Licentiates into the class of Fellows is to us an absurdity; it displays the very principle of monopoly that has so long governed the College in Pall Mall, a monopoly which the projected arrangements of Parliament will unquestionably annihilate. The liberality of the College will, we trust, no longer be voluntary, but be made a compulsory act.

Sir Henry Halford is not aware that druggists prescribe; he says, in answer to a question, "it does not come to my knowledge that druggists practise physic at all;" he must be lamentably ignorant of the common affairs of this world. Of the fact every one else is aware. We marvel that he does not know it. When interrogated on the subject of a person not being admissible into the College who practises midwifery, the reasons given are the following:—"I think it is considered rather as a manual operation, and that we should be very sorry to throw any thing like a discredit upon the man who had been educated at the Universities, who had taken time to acquire the improvement of their minds, in literary and scientific acquirements, by mixing it up with this manual labour. I think it would rather disparage the highest grade of the profession, to let them engage in that particular branch, which is a manual operation, very much. As to all the knowledge of the diseases of women and children, it is expected of us, and we hope that we are thoroughly informed upon them." The circumstance of a man being engaged, in any shape, in manual labour,

is to Sir H. Halford a sufficient reason for his being inadmissible to the College, a reason equalled only in its *profundity* by that of the celebrated knight-errant, — why males should not practise midwifery! With a view to keep the practice of the physician respectable, it is imperative that he should not practise surgery as well as midwifery, and "that he disfranchises himself from any community that is not strictly medical." Division of labour is alleged as the chief reason for such an enactment of the College.

We are glad to find that Sir Henry is favourable to the system of apothecaries being remunerated for their visits, or their advice, instead of for physic. We did not expect so much acquiescence with this almost predominant feeling amongst general practitioners, we anticipated the same consistency of character, in one respect, that of supporting the restrictive system, and limiting the receiving of fees to the physician alone.

When interrogated on the formation of a Board of Examiners to examine into the qualifications of candidates to practise as physicians, Sir H. believes that the Censors of the College of Physicians are as capable of examining on each and all of the departments, as a board would be, constituted of Physicians, Surgeons, and Apothecaries. He recommends a continuance of the old system, but especially reserving to the College of Physicians its long possessed rights; he says "We do not want any increase of power." This noble admission reminds us of the "fox and the grapes:" we do not want any new powers granted, we are satisfied as we are at present, only do not disturb us,— leave us as we are. Sir Henry would not object to the organisation of a Board of Physicians, Surgeons, and Apothecaries to examine general practitioners. "I would not object to this, but I think the Physicians, Surgeons, and Apothecaries will do their duty in their several halls." "What, if any, are the offices the President of the College holds *ex officio?*" "At present he is President of the Vaccine Board and Trustee of the British Museum." "Was he not consulted in recommending a professor at the King's College?" "I was a subscriber to the original institution, and a member of the council, and as such my opinion was asked, but not as the President of the College of Physicians." Medical topics, such as cholera, bilious fever, &c., which come before his Majesty in Council, are referred to the President of the College of Physicians. No officer of the College is required to take the sacrament prior to his admission into office; this was necessary with regard "to the Censors Board," previous to the Dissenters' Act. Dissenters were of course necessarily excluded. The by-laws of the College are not published, a copy is placed in the hands of the President and the Censors as they come into office; so that, in lapse of time, all the Fellows become acquainted with the rules which they have to obey. The Licentiates cannot obtain a copy of them; those which relate to themselves are printed. The library is not thrown open to the Licentiates, because the Fellows have expended 8,000*l.*, and, by admitting the Licentiates to the library, the expenses would be augmented. "No Licentiate is ever refused a book if he will only ask a Fellow." Each Fellow, on his admission, is required to take an oath that he will not divulge the proceedings of the College.

That the very web of Sir Henry Halford's evidence is woven with the tissue of monopoly, this concise abstract we have given will suffice to show.

Dr. Macmichael, Physician to the King, examined.—Has been Registrar and Censor. Was aware that Dr. Wells was proposed a Fellow of the College; why he was not admitted is not aware. Has no doubt but that the connexion of the College with the Universities has elevated the medical profession in this country. Graduates from Padua and other celebrated foreign Universities were some years ago admitted in London to the Fellowship. Many of the most distinguished physicians in this country have been closely connected with the Universities:—Harvey, Friend, Glinson, Heberden, Mead, Sir G. Baker, Dr. Baillie, Dr. Wollaston, Dr. Young. Men cannot obtain that finished intellectual education and moral discipline in three or four years—say at Edinburgh—that they can in eleven at Oxford or Cambridge. When a vacancy occurs for Physician at Bartholomew's Hospital, the College has the power of recommending a Fellow; if he be elected, it costs the College thirty or forty pounds a-year.

A physician in this country sustains a much higher rank than in any other. The Doctor admits Dr. Wells to have been a remarkably "clever man;" and, from reading his life, would "conceive he was a man of singular virtue and independence of mind." The only objection—the only suspected reason—for his non-admission into the Fellowship is, that he was "a man of extremely irritable disposition." Pope, the poet, "the little wasp of Twickenham," was also a very irritable man; yet he was allowed the highest honours, was received into the society of the learned and the wealthy. Dr. Wells was proposed by Dr. Baillie and Dr. Pitcairn; and, we should suspect, if he had not been in every respect a most eligible person, he would not have had the honour of being proposed by such men. The answers of Dr. Macmichael on almost every subject are alike to those of Sir Henry Halford; both appear to have studied in the same school of monopoly, restriction, and absurdity; both are embarked in the same cause,—the retention of things as they be. The same question was put to Sir H. Halford—"Whether it would be desirable that Apothecaries should be remunerated for their visits, instead of their medicine?" The same reply in the affirmative was given.

"I think the College of Physicians is of the greatest use, inasmuch as it tells the public who are licensed and who are not; if the public choose to employ an unlicensed practitioner, they must do it at their peril." We would ask the Doctor in what manner, through what channel, they make this known to the public: we are not aware of any medium. If a man assume the title of Doctor, and be not noticed by the College—have not his name in its books—are the public acquainted with the facts?

Either a Surgeon, or an Apothecary, or any one, may practise physic,—we have no control over them.

GRESHAM COLLEGE.

Dr. Southey has been elected to fulfil the sinecure office of Professor of Physic at this Institution. There being no duties to perform, we need not say—he will do justice to the office.

ST. BARTHOLOMEW'S HOSPITAL.

Dr. Locock has been appointed Lecturer on Midwifery at this institution, *pro tem.*, in the place of Dr. Ashburner.

ON THE CHANGE OF COLOUR IN THE CHAMELEON.

Mr. Milne Edwards, the indefatigable and erudite physiologist, has been investigating the

causes of the mutation of colour in the chameleon. It is a subject that has heretofore baffled all attempts at a satisfactory solution, but it could have fallen into few hands where it would have received more justice. The following is a summary of his inquiries.

" 1st. That the change in the colour of the chameleon does not depend essentially, either on the more or less considerable swelling of their bodies, or the changes which might hence result on the condition of their blood, or of their circulation; nor does it depend on the greater or less distance which may exist between the several cutaneous tubercles; although it is not to be denied that these circumstances probably exercise some influence upon the phenomenon.

2ndly. That there exists in the skin of these animals two layers of membranous pigment, placed the one above the other, but arranged in such a way as to appear simultaneously under the scarf skin, and sometimes so that the one may conceal the other.

" 3rdly. That every thing remarkable in the changes of colour which manifest themselves in the chameleon, may be explained by the appearance of the pigment of the deeper layer, to an extent more or less considerable, in the midst of the pigment of the superficial layer; or from its disappearance underneath this layer.

" 4thly. That these displacements of the deeper pigment can in reality occur; and it is probably a consequence of them that the chameleon's colour changes during life, and may continue to change even after death.

" 5thly. That there exists a close analogy between the mechanism by the help of which the changes in colour appear to take place in these reptiles, and that which determines the successive appearance and disappearance of the coloured spots in the mantles of several of the cephalopode mollusca."—*Edinburgh New Philos. Journ.*

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.

It may be in the recollection of many of our readers, that a Mr. Marshall was permitted, a year or two since, to try a secret remedy for cataract, which he possessed, on several patients then attending the hospital. We believe about twenty cases, altogether, were placed under his care; some of the patients considered that they were slightly benefited by the means he employed, but by far the majority did not receive the least advantage from the application, and, in one or two cases, it induced very severe inflammation, and was necessarily given up. The results of the trial were altogether unfavourable, and Mr. Marshall disappeared from the scene.

Within the last week or two he again made his appearance, again to solicit permission to try his " secret," and to prove its efficacy. Again his request was granted, and three cases of commencing cataract were placed under his care. As yet, we are unable to state the results, but in a few weeks we nothing doubt but that Mr. Marshall will *de novo* despair of success, and withdraw himself altogether from the hospital. This gentleman, we understand, is not the "*inventor or discoverer*" of the preparation which he employs; he found it among the papers or recipes of a venerable female ancestor, whom we will not particularise further, than by saying she bore that relationship to him, which is famous for " wise saws" and valuable receipts. Mr. Marshall is not a member of the medical profession.

Many valuable therapeutic agents are learnt by chance, or from empirics. The latter, unknowing or careless what injury he does, drives on most heedlessly, giving medicines and doses which the cautious and properly educated practitioner would tremble at. In this way the profession have been put in possession of many useful medicines. It cannot be denied that the practice even of the notorious St. John Long will afford a hint to the physician which he would never have dared to practise, but for the lessons of the empiric. Until his time, medical men were not aware that the application of the mineral acids to the integuments of the chest or dorsum, would enable the sufferer to GORGE himself with animal food. In diabetes the lesson may be available. So again with Mr. Marshall (*sic parvis componere magna solebam*); the remedy he employs is a stimulant; one or two patients have received slight benefit from its application; and he professes that in other cases (not at the hospital), it has proved of advantage, more especially in the commencement of the disease. The most common

cause of cataract is, we believe, a low inflammation taking place in the crystalline lens itself, or in its membrane; and we know that in some cases of internal, and in almost all cases of external, inflammation, stimulant applications are of great advantage. It is, therefore, possible, pursuing the analogy yet further, that stimulating the eye may have the effect Mr. Marshall seems to expect from it, although his own peculiar remedy may not be available. We have been led to make these remarks from two facts which have occurred in our own practice. We had occasion to apply the stimulating ointment, composed of the arg. nit., liq. plumb. acet., and lard, to a patient with cataract, who had at the same time inflammation of the conjunctiva. The latter was removed, and the patient considered that his vision was improved, and it remained so for some days. Shortly after, we applied the same ointment in a case of catarrhal inflammation; the individual laboured under myopia. The external inflammation was also removed, and the myopia was considerably relieved. The advantage thus derived continued for several hours.

PROCEEDINGS OF THE BRITISH ASSOCIATION.

Anatomy and Medicine.

Mr. Broughton read to the Society the results of the experimental inquiry respecting the sensibility of the nerves of the brain, which, at the last meeting of the Association, Dr. Marshall Hall and he had been requested to undertake. The most important new fact stated in this paper was, that the 8th pair of nerves, in several experiments on horses and asses, appeared quite insensible to ordinary irritation, and no muscular contraction was observed to succeed its irritation; but when the trunk of the nerve was *compressed* with the forceps, or when it was cut through, and the lower portion of the upper segment compressed in that way, a struggle, an inspiration, a cough, and effort to swallow, were always observed. At the conclusion of the paper, Sir Charles Bell made some observations on the impartial spirit in which such inquiries ought to be conducted, and on the importance of their being prosecuted, under the guidance of a minute knowledge of anatomy, and complimented the authors of the memoir on the evidence it bore of these two qualifications.

Dr. Alison read a notice of some experiments by Dr. J. Reid, illustrating the connexion of the irritability of muscles with the nervous system, with observations by himself. The result of these experiments was (in confirmation of the doctrine of Haller and of Wilson Philip, and in opposition to that lately propounded by Mr. J. W. Earle), that the irritability of muscles, after it has been exhausted, or at least greatly diminished, by galvanic irritation, may be restored by rest; although all their nerves be divided, and they be rendered incapable either of sensation or of voluntary motion. Some remarks having been made by Dr. A. Thomson on the sources of fallacy to which he conceived experiments of the kind detailed are exposed, it was resolved to appoint the following gentlemen a committee, to witness the repetition of these experiments by Dr. Reid, viz. Dr. Bright, Mr. Clift, Dr. A. Thomson, Dr. Hodgkin, and Dr. Alison.

Dr. Alison stated that he had a communication to lay before the Section, on the vital powers of arteries leading to inflamed parts; but that he was desirous, as Mr. Dick had at present some horses which would afford an opportunity of showing the phenomena to which he wished to call the attention of the meeting, that a committee should be appointed to witness these phenomena previously to the reading of the communication. A committee was accordingly proposed and appointed, consisting of Mr. Broughton, Mr. Bracey Clark, Mr. Dick, Dr. Fletcher, Mr. Clift, and Dr. Alison.

The reading of Dr. Hodgkin's memoir on the action of poisons was concluded.

In the second part of this report, Dr. Hodgkin began with describing the general and local effects produced by injecting hot water into the stomach of the dog. He next proceeded to direct attention to the inferences which may be drawn from the situation of the principal lesion of the stomach in poisoning, showing, that where the agent is intensely active, this is observed in the greater curvature immediately opposite the orifice of the œsophagus, rather than precisely at the cardiac extremity, where, in other cases, the

most intense injection is generally met with; whilst, on the other hand, if the poison be not sufficiently strong at once to destroy the powers of the stomach, its effects will be found most conspicuous in those parts which, under ordinary circumstances, are the most frequent seats of injection. Another circumstance on which Dr. Hodgkin particularly insisted, was the occurrence, in cases of inflammation of the stomach, of an interstitial deposition of lymph, producing the appearance of small, irregular, opaque whitish spots in the substance of the mucous membrane itself. This appearance he considered as of importance, as furnishing, in some instances, a ground of distinction between the effects of decided inflammation and mere congestion. The character of the secretion found on the surface of the mucous membrane also, Dr. Hodgkin considered capable of throwing considerable light on the condition of the membrane before death.

A paper was read by Dr. Charles Williams, *On a New Law of Combustion.* In this communication the author showed that many organic substances exhibit in a dark place a pale lambent flame, similar to that exhibited by dry phosphorus when heated in the air to a temperature below incandescence (as low as 300°), and that this flame bursts out into that known to attend ordinary combustion, when the substance is plunged into oxygen gas. This feeble combustion commences in organic substances when vapours begin to be evolved. This feeble flame has little heating power, and passes to ordinary flame by a rapid transition, accompanied by a feeble detonation. Some metals, as zinc and potassium, show the same phenomenon, though of shorter duration, probably from the formation of a coating of oxide. As a practical result from his observations, he remarked on the danger of many manufactures, as those of soap and candle-making, in which vapours are driven off from organic substances, and this low combustion actually goes on during the whole process of manufacture.

Dr. Sharpey read a communication on certain peculiarities in the circulation of the porpoise, which he illustrated with preparations.

The principal facts established by Dr. Sharpey's investigations, were, 1st, That the veins as well as the arteries of the porpoise, present, in several regions of the body, a remarkable plexiform arrangement; and, in some places, plexures of both kinds of vessels are combined or mingled together.

2nd. That the arterial plexures are not confined to the thorax and vertebral canal, (the situations in which they were particularly described by Mr. Hunter as occurring in whales, in his observations on the structure and economy of these animals, published in the Philosophical Transactions of 1787,) but several are formed by the arteries of other parts.

3rd. The description given by Cuvier (Leçons, vol. iv., p. 258), of the division of the caudal portion of the aorta, requires to be corrected, inasmuch as the vessel is not wholly and suddenly resolved into small branches, which unite to form it anew, but it is only diminished in size, and concealed in the midst of a plexus of small vessels, from which it again comes out.

4th. Several arteries show a tendency to divide into long parallel branches, of which the arteries of the ploric viscera offer a striking example.

5th. The brachial artery, as in tardigrade animals, divides into many long branches, which unite again into a few larger vessels, after forming a plexus which is not convoluted.

Lastly. The internal carotid, which at its origin is as large as in man, diminishes in a tapering manner, and without giving off branches till it enters the skull, when it is scarcely thicker than a pin.

Dr. Allen Thomson exhibited to the meeting a series of preparations, made by Dr. Sharpey and himself, of injections of the lacteal and lymphatic absorbent vessels of the seal, porpoise, turtle, and man—preparations which appear to them to support the conclusions of Professor Panizza of Pavia, in opposition to the opinion of Fohmann, Lippi, and others, as to the non-existence of numerous communications between the absorbents and veins. It was resolved that the connexions of these two systems of vessels should be proposed to the General Committee as a subject for experimental inquiry.

Dr. William Thomson read a paper on the infiltration of the lungs with black matter, and on black expectoration, particularly as occurring in coal-miners, iron-moulders, and other workmen exposed by their employment

to the inhalation of carbonaceous gases and powders; and he requested the co-operation of those medical gentlemen, who may have opportunities of observing the diseases of these classes of workmen in different parts of the country, in investigating the causes and nature of these morbid appearances.

Dr. Thomson referred to a case of this kind, which had fallen under the observation of his father and himself in the year 1825, in a collier residing at Tranent; to a case described by the late Dr. James Gregory, in the 109th number of the *Edinburgh Medical and Surgical Journal;* to two cases described by Dr. William Marshall, of Cambuslang, near Glasgow, in the number of the *Lancet* for 17th May, 1834; and to various cases and observations contained in two communications in the number of the *Edinburgh Medical and Surgical Journal*, now in the press, the one by Mr. Graham, lecturer on chemistry in Anderson's Institution, and the other by Dr. G. Hamilton, of Falkirk, as well as in a number of hitherto unpublished communications received by his father and himself from professional gentlemen in different parts of the country. The author exhibited also a number of preparations and drawings illustrative of the appearances, nature, and seat, of this singular infiltration.

Dr. C. J. B. Williams, of London, made a few observations on the subject.

Mr. Dick next read a short notice on the use of the omentum or caul, which he illustrated by a comparison between the structure of this organ in the horse and in the sheep, showing that in the horse, in which the omentum is small, the intestines are fixed, and undergo comparatively little change of place. The facts adduced by Mr. Dick seemed to him to corroborate the opinion that the omentum served, by interposition between the intestines and abdominal parietes, to facilitate motion.

Sir Charles Bell then delivered a discourse explanatory of his views of the functions of the nervous system, and of the manner in which this department of physiology should be studied.

Dr. Alison read a notice to some observations made by himself and Mr. Dick, veterinary surgeon, on the vital condition of arteries leading to inflamed parts, referred to at Tuesday's meeting, and one of which had been repeated by the Committee then appointed for the purpose, with a short statement of inferences, as to the essential nature of inflammation, thence deducible. The result of these observations was, that the contractile power of the larger arteries supplying inflamed parts,—both their elasticity, and that additional power which they possess during life, and retain for some hours after apparent death,—appears to be decidedly *less* than that of the corresponding arteries of sound limbs. The members of the Committees, resident in Edinburgh, were directed to repeat and vary the experiments detailed in both the papers by Dr. Alison, and to report the results of their observations to the Section at next meeting.

Dr. Macdonnell communicated the results of a long continued series of observations made by him since the year 1784, on the influence which posture exercises on the quickness of the pulse, and on the connexion between the frequency of the pulse and of the respiration both in health and in disease, and suggested certain practical applications of these views to the distinction of diseases.—Dr. W. Thomson suggested, that, as the pressure of business rendered it impossible to enter so fully on the consideration of this very important subject as was desirable, Dr. Macdonnell should be requested to prepare a fuller account of his experiments and observations, to be laid before the Medical Section at the next meeting of the Association, which proposal was approved of.

Dr. Bushnan exhibited some specimens of small animals which he had found in human blood; when some remarks were made by Dr. Anderson, suggesting doubts as to whether these animals had not found their way into the blood subsequently to its being drawn from the body. The Chairman suggested the necessity of farther observations for determining whether the animals in question can be regarded as entozoa.

Dr. T. J. Atkin communicated the result of his inquiries into the varieties of mechanism by which the blood may be accelerated or retarded in the arterial and venous systems of the mammalia. After stating that his attention had for some time been directed to this subject, which he conceived to be of great

interest to the physiologist, he particularly drew the attention of the Section to four modifications of arterial distribution, as indicated, 1st. By the angle at which a branch comes off from its trunk. 2ndly. The direction of the vessel. 3dly. The subdivision. And 4thly. The formation of plexus. In illustration of the first, or angle of origin, he exhibited a preparation of the aorta of the tiger, in which the superior intercostals arose at an acute, the middle at a right, and the lower at an obtuse angle; from which he inferred that the force and velocity of the blood are rendered equal through the whole series. In speaking of the second circumstance, or the direction, he adverted to the tortuous entrance of the internal carotid and vertebral arteries into the skull in the human subject, and showed that it is still more remarkable in the horse, which in feeding requires to have the head, for a considerable time, in the dependent posture. But the best examples of the tortuous, or serpentine, course, are to be seen in the spermatic arteries of the mammalia. This mechanism, he contended, adapts the circulation to the various positions in which organs may be placed, and to their states of action and repose. In speaking of the third modification, or the subdivision into numerous long branches, he particularly alluded to the observations of Sir Anthony Carlisle with respect to the arteries of the sloth, and showed that a similar ramification is found in the hedgehog, both in the arteries of the panniculus carnosus and of the mesentery. Of the last modification, the plexus, he showed examples in the rete mirabile of Galen in the internal carotid, and of Hovius in the ophthalmic artery, of the ruminantia. He inferred that this structure prevents vascular turgescence, which would otherwise occur, during the long period when these animals keep their head in the dependent position while browsing. He also showed that a rete mirabile exists in the ophthalmic artery of the seal and goose, and considered it probable, that in them it is conducive to the alternate adaptation of the eye to vision in air and water. He described the remarkable plexiform arrangement which exists in the mesenteric arteries and veins of the hog; and instituted a comparison between these vessels in carnivorous and herbivorous mammalia, concluding that these modifications are in conformity with the transmission of the blood through the liver, the rapidity of the peristaltic motion, and the power of nutrition.

Dr. Hodgkin read a part of the history of the results of the experimental inquiry respecting the action of poisons, the prosecution of which was committed by the Association at its last meeting to himself and Dr. Roupell, so far as he himself had been able to prosecute the inquiry. Conceiving the object which the Association had more particularly in view in calling for this report, to have been to facilitate the recognition of the effects of acrid poisons, with a view to aid in judicial inquiries, Dr. Hodgkin considered it as an essential preliminary, to obtain an accurate and definite knowledge of the different appearances which are presented by each part of the alimentary canal within the limits compatible with health; and accordingly, in the first part of his report, he entered at considerable length into the consideration and description of these. Dr. Hodgkin's memoir was illustrated by wax models and drawings of beautiful execution.

Dr. Yelloly made some remarks on the importance of distinguishing in morbid investigations between the redness produced by simple vascularity and that which results from inflammation, and illustrated the subject by a drawing of a portion of the spinal cord of a person who met a violent death, when in the enjoyment of perfect health.

Dr. Allen Thomson made some remarks on the development of the human fœtus, and exhibited a preparation of a very small human embryo, which was contained in an ovum about a month old; but which, from its structure, appeared to have been blighted at the twelfth or fourteenth day. The structure of this fœtus was illustrated by a reference to specimens of the fœtus of the cat, sheep, and birds, at early periods, the object of Dr. Thomson's remarks being to show that the human embryo, in the early stages of development, passes through changes similar to those ascertained to take place in other vertebrated animals.

Sir Charles Bell continued his discourse on the principles which should guide physiologists in investigating the functions of the nervous system, referring particularly to the necessity of a knowledge of the minute anatomy of the

brain, to the ascertainment of the functions of its several parts.

Professor Syme made some remarks on the operation of removing portions of the joints, and combated the objections urged against this operation, as insufficient for the removal of the whole of the diseased parts, and as leaving the patients in possession of a limb rather cumbersome than serviceable. Professor Syme exhibited to the Section several patients on whom the excision of the elbow and shoulder-joint had been performed some time previously, in order to prove that neither of the objections adduced was valid.

Abstract of a communication of the discoveries of Reichenbach, in regard to the products of the destructive distillation of organic substances. In this paper Dr. Gregory detailed the properties of Paraffine, Eupion, Kreosote, Pittakall, Picamar, and Kapnomor, and exhibited specimens of several of them. He also made some observations regarding the more common products of destructive distillation, and stated that several of these substances are found in the naphtha of Rangoon; the petroline found by Dr. Christison in that substance being the substance afterwards named paraffin by Reichenbach.

Dr. Thomson exhibited a few specimens and drawings of the young of the common thornback, at the period when the external branchial filaments exist. He described the connexion of these filaments with the internal gills, and the circulation of the blood in the single vessel running through each of the fifteen filaments that project from the side of the neck, which he had observed inthe animal, kept alive for some days.—*Edinburgh New Philosophical Journal.*

Foreign Medicine.

Remarkable Monstrosity.

M. Angelo Bossini relates the following case in the *Annali Universali di Medicina.*

During the night of the 15th February, 1834, he was called to attend a woman of the name of Francesco, 43 years of age, the mother of several healthy and well-formed children. She had been many hours in labour, and the midwife in attendance considered the case to be difficult. He found two feet already protruded, one of which, according to the midwife, came down immediately after the rupture of the membranes, the other she had brought down. M. Bossini then sought for the arms, and having ascertained the situation of the umbilical cord, he brought one, as he thought, to the vulva, when he found it was another foot. He, of course, considered now that he had to do with a twin case, but soon discovered that this third limb belonged to the same trunk as the two preceding. By carrying his manœuvres a little further, he found the fourth limb, which he brought down, and the hips were then tangible, when he ascertained that the four lower extremities with a portion of two trunks were united into one at the umbilicus. The narrator of the case then gave the body the motion of semi-rotation, by which he was enabled to reach the arms, and bring them down. By pursuing the manœuvres of rotation, elevation, and depression, the monster was born. It presented two heads, two necks, uniting into one large thorax, with two arms, one of which appeared to belong to each fœtus. There were two spinal columns, two scapulæ, two ani, and two sets of the genital apparatus (female). There was only one placenta. This extraordinary production died during the progress of labour. The right fœtus was more developed than the left, but they both appeared to be of full growth.

Re-union of the Nose, after its Complete Separation.

BY DR. FRANCISCO M. CARLIZZI, OF NAPLES.

On the 5th of November, 1832, a woman of the town named Carmela Napoletano, 21 years of age, having quarrelled with a man of the name of Gennaro Marotta, the latter seized the girl's nose between his teeth, and bit off a large portion, comprising the two alæ, the lobe, and the septum, as far as the ossa nasi, and then threw it in the mud. Napoletano ran in this condition to the police office of the quarter Montecalvario, where the wound was dressed. Three hours afterwards Dr. Carlizzi went to the police office, and, having heard the history just narrated, requested the commissary, Signor Portaluppi, to have the nose sought for. In about two hours and a half it was brought him, crushed and covered with filth. In spite of these unfavourable circumstances, Dr. Carlizzi removed the dressings, washed the nose in boiling water, and

and proper bandages. The seventh day the dressings were removed, when it was found that complete union had taken place, but the left ala was rather deformed, inasmuch as it had been crushed between the teeth of Marotta. Thirty-seven days after the injury cicatrisation was perfect, but the nose presented a monstrous appearance from the redness of the cicatrix, and the lividity of the mutilated part. To remove this extraordinary appearance, a weak solution of the nitrate of silver was applied, and when the eschar had separated, the nose appeared uniform, and many medical men doubted the fact of the accident having happened.—*Osservatore Medico.*

Fatal Mistake in Dispensing.

A physician at Paris lately prescribed four grains of the proto-chloride of mercury (calomel), in a potion for three children, the eldest seven years old. The prescription was sent to a chemist to be prepared, when the apprentice committed the fatal error of using the deuto-chloride (corrosive sublimate) in place of the proto-chloride. As a necessary consequence, the three children were poisoned, and the unhappy father rendered childless in one day. The young man has been sentenced to a month's imprisonment, and to pay 2,000 francs to the father. His master is also condemned to pay the same sum to the father, and 50 francs' fine for not keeping the poison under lock and key.—*Journal Hebdomadaire.*

Foreign Hospital Reports.

HÔTEL DIEU.

Strangulated Femoral Hernia mistaken for a Serous Cyst — Operation.—Fistula communicating with the Intestine—Cure.

Catherine Rosette, ætat 51, a limonadière, accustomed to traverse the streets of Paris daily to sell her merchandise. Previous to the 23d of March she had no tumour in the groin. That day, after enduring great fatigue, she suffered from severe colic, the pain of which extended to the right groin. When she returned home, she was able to discover that a tumour of the size of an egg had formed in that situation. She had an enema, which brought away some fæces. The colic continued, and a little fever came on. On the 2nd of April she became an in-patient at the Hôtel Dieu. The history she then gave was not very clear.

The tumour in the right groin was not very prominent: it was hard and irreducible, the skin covering it inflamed; abdomen not tense, pain not severe, and vomiting had not returned since the preceding evening; pulse weak, not frequent; the features were slightly changed in appearance. A bath, leeches, poultices, and emollient enemata were ordered.

In the evening the symptoms were not pressing; the enema had returned coloured with stercoraceous matter, and the pulse had gained a little more power. A small quantity of blood was abstracted from the arm. M. Sanson was of opinion that strangulation had taken place, and determined on performing the operation.

A crucial incision was made in the skin, by which an opening was made into a small abscess, the contents of which were evacuated. The incisions were then repeated, but very cautiously, and the operator came down upon a cyst or herniary sac full of a serous fluid. He considered that he had arrived at the sac, and made strict search for the intestine, but could not find any. It was, therefore, a matter of doubt, whether this were really a cyst or the sac of a hernia. The wound was dressed, but the lips were not brought into apposition. The next day the patient was going on well. M. Dupuytren made an anxious search for intestine in the wound, and for stercoraceous matter, but without success. He accordingly stated, in his clinical lecture, that the tumour of the groin was formed by a cyst; and enlarged on the difficulty of forming a diagnosis in such a case. He also related several remarkable cases, and concluded with the remark, that there is never any danger in mistaking a cyst for a hernia, but that the converse might be followed by serious symptoms.

8th. At the visit this morning considerable surprise was caused by the presence of a lumbricus at the bottom of the wound, with a little yellowish fluid. No doubt could then be entertained as to the nature of the case; and M. Dupuytren then stated, that a portion of intestine had passed under the arch, that it had merely been pinched, and consequently erosion only of the gut had taken place. He considered that the cyst which had been found re-applied it to the face, fixing it with sutures

was the herniary sac, and the reason why the intestine had escaped their most active researches was, that it had passed only partially under the crural arch, and had not protruded at all beyond it.

For the next few days there was only pus in the wound, but on the 21st, gas and a small quantity of yellowish matter escaped. This state of things continued till near the end of May, when a truss was applied, and the pressure it exerted soon caused the complete obliteration of the fistula, and the patient left the hospital quite well.

Inflammation of the Hernial Sac simulating Strangulated Hernia.

Jean Claude Marchal, fifty-two years of age, messenger, of the sanguineous temperament and athletic figure, has been the subject of inguinal hernia of the right side ever since his fifteenth year. He wore a bandage only during the day time, and the rupture has frequently descended, more so latterly than formerly, and he has at times been obliged to have recourse to a medical man to reduce it.

During the night of the 5th of December the hernia again descended, and he was unable to reduce it. A surgeon was called in, who made long and fruitless efforts. Severe pain then ensued in the right groin, which was occupied by a large tumour, extending almost to the bottom of the scrotum. Colic came on, followed by nausea and vomiting, first of bilious, then of fæcal matter.

After these symptoms had continued thirty-six hours he was admitted into the Hôtel Dieu. He was then labouring under severe pain in the right inguinal region, with general agitation; the tumour was hard, elastic, and voluminous, following the course of the spermatic vessels, and not reducible. Scarcely any pain was felt on pressing on the abdomen, which was soft and not tympanitic; pulse small, 130; breathing hurried and difficult. The bowels had not been opened for two days, although he had had two enemata.

Thirty leeches were applied, and he was put into the bath, and had an enema. The taxis was tried, but unavailingly. The next day, no improvement having taken place, M. Sanson thought it would not be advisable to defer the operation, as symptoms of strangulation had continued fifty hours.

An incision was made, extending from the abdominal ring to the bottom of the scrotum, dividing the skin and cellular tissue; the fasciæ were then incised separately, and the vessels tied. The sac contained a large quantity of sanguinolent fluid, with flakes of lymph floating in it, and when this was removed the surgeon could not discover either intestine or omentum within it. More careful examination showed that the neck of the sac was obliterated, and that the real nature of the case was inflammation of the old hernial sac. Simple dressings were applied, in such a manner as to cause the cavity to fill up from the bottom. This plan succeeded, and in the course of a few weeks the patient left the hospital cured.

Before he left, he acknowledged that the hernia had not descended for a long time, and that the tumour which existed in the groin was only of five or six days' duration.

BAKER *v.* HANCOCK.

A CASE of some importance to general practitioners was decided in the bail court side of the King's Bench on Tuesday. An apothecary, named Baker, brought an action against a journeyman baker, named Hancock, to recover 21*l.* 15*s.*, the amount of a charge brought for attendances, 87 in number, at 5*s.* each. The disease was inflammation of the liver, and the visits were sometimes as often as four times a-day. The jury found for the plaintiff for only 15*l.* 5*s.*, which is less than 20*l.*, the amount required under the statute to entitle to costs. By this result the plaintiff loses all the costs, which will more than swallow up the amount of his bill awarded under the finding of the jury.

DEATH OF DR. EADY.

THIS celebrated DOCTOR of *dead-wall* and *placard* notoriety has lately died. He was the son of an honest humble cooper of Huntingdon, and was subsequently a linen-draper at St. Ives in the same county, from whence he emigrated to the metropolis. Here his fame soon became notorious enough. He was not, however, so lucky as some others who have followed the same branch of art, as he was as frequently to be found within the rules of the King's Bench as out of them.

APOTHECARIES' HALL.

Names of Gentlemen to whom the Court of Examiners granted Certificates of Qualification on Thursday, October 30th:—George Henry Perritt, London; Frederick Beverly Dixon, Norwich; John Stileman Bostock, Steyning; Samuel Davie, Ipswich; Thomas Lucas, Soham; John Brookes Williams, Tetbury; William Henry Smith, Kennington; Richard Francis Salter, Steyning; Wm. Ruffell Dalton, Ipswich; William Alexander Anderson, London; Emanuel Baker, London; John Curric, Bungay.

MISCELLANY OF FACTS.

College of Physicians, Ireland.—Officers elected, Oct. 18th. — President, Dr. Jonathan Osborne; Vice-President, Dr. John O'Brien; Censors, Drs. J. O'Brien, G. A. Kennedy, Percival Hunt, and W. Adams; Treasurer, Dr. T. H. Orpen; Librarian, Dr. S. Litton; Professor of Midwifery, Dr. W. F. Montgomery; Inspectors of Apothecaries' Shops, Drs. O'Brien, M'Cready, Hunt, and Adams; Registrar, Dr. G. A. Kennedy.

Glasgow Faculty of Surgeons. — Office-bearers for the year ensuing: Dr. Corkindale, Preses; Dr. Steel, Visiter; Dr. Perry, Collector; Boxmasters, Mr. J. M'Cleod, Dr. John M'Farlane, and Dr. W. Gibb, Seal-keeper; Assistant-Examinators, Dr. Young, Dr. Anderson, Dr. Cowan, Dr. J. Maxwell, and Dr. George Watson; and Dr. Pagan, Librarian.

Glasgow Medical Society, Oct. 21.—Officers appointed this day: Dr. J. M'Farlane, President; Drs. W. M'Kenzie and W. Archinloss, Vice-Presidents; Dr. R. Cowan, Treasurer; and Dr. J. A. Lawrie, Secretary.

Mr. Liston leaves Edinburgh for the North London Hospital, in connexion with the University in Gower-street, within a few days at furthest. His departure will deprive the Edinburgh Surgical School of one of its highest ornaments. It is the intention of his numerous friends and pupils, as well as others, to give him a public dinner before he leaves the northern for the southern metropolis.

Dr. George Gregory has resigned the office of President of the Westminster Medical Society.

Sir William Blizard has resigned his office of junior Vice-President of the Royal College of Surgeons. Mr. Lynn, the next in rotation, declined accepting it, and Sir Astley Paston Cooper has been elected. It is understood that Sir William Blizard will soon resign his seat as Examiner and Councillor.

It deserves to be stated, to the credit of the Duke of Newcastle, that he allows a medical gentlemen the sum of £200 a-year for gratuitously attending the poor of Aberystwith, near which place his Grace has lately purchased the fine estate of Haford.

WEEKLY BILL OF MORTALITY.

London, Tuesday, Nov. 4, 1834

Abscess	4	Inflammation	18
Age and Debility	27	Inflammation of the Bowels & Stomach	2
Apoplexy	14	Inflammation of the Brain	2
Asthma	15	Inflammation of the Lungs and Pleura	10
Cancer	2	Insanity	4
Childbirth	5	Jaundice	1
Cholera	3	Liver, Diseased	6
Consumption	67	Measles	7
Convulsions	24	Mortification	4
Croup	3	Paralysis	9
Dentition, or Teething	6	Scrofula	1
Dropsy	24	Small Pox	6
Dropsy on the Brain	12	Sore Throat & Quinsey	2
Epilepsy	2	Spasms	3
Fever	7	Thrush	2
Fever, Scarlet	18	Tumour	1
Fever, Typhus	3		
Gout	1	Stillborn	14
Hæmorrhage	1		
Hooping-Cough	9		

Males 183 Females 163 Total 343

Increase in Burials reported this week 89

APPOINTMENTS.

General.—Dr. Evans, fourth physician to the Birmingham Dispensary. Mr. George Elkington, apothecary to the same. Mr. T. Dillon, surgeon to the Mayo County Infirmary. Sir James Eyre, of Margaret-street, Cavendish-square, one of the accoucheurs to the St. George's and St. James's General Dispensary.

DEATHS.

Dr. W. Kent, of Deptford. Mr. J. Wesley, surgeon of H.M.S. Racer. Mr. John Gibb, of Dumfermline, surgeon. Mr. Wm. Bell, of Pocklington, surgeon.

LITERARY INTELLIGENCE.

Preparing for publication—A Clinical Account of Fever, Gout, Rheumatism, Cholera, Jaundice, &c., and various Diseases of the Chest, with Remarks on their Pathology and Treatment. By Dr. ALDIS.

BOOKS RECEIVED.

Quain's Anatomical Plates. Fasciculus XVIII.

CORRESPONDENTS.

Mr. Brooke's paper in our next.

A Constant Reader.—Many of our intelligent correspondents differ from him on the chief points.

Mr. Allsop's case of last week was extracted from the *Edinburgh Medical and Surgical Journal.*

METEOROLOGICAL JOURNAL.

MONTH. Oct., 1834.	Moon.	Thermom.			Barometer.		De Luc's Hygrometer.		Winds.		Atmospheric Variations		
30		48	54	45	30·27	30·12	77	76	W.S.W.	S.W.	Cloudy	Fine	Fine
31		49	57	48	30·02	29·91	76	77	S.W.	S.S.W.	Fine	Cloudy	—
Nov													
1	☽	53	57	46	29·91	29·88	78	74	S.W.	W.S.W.	—	Fine	—
2		51	55	50	29·88	29·84	75	75	W.	W.	Cloudy	—	—
3		54	56	47	29·84	29·84	75	76	S.	S.	—	—	—
4		49	55	49	29·92	29·77	77	78	S.S.W.	S.S.W.	Foggy	—	Cloudy
5		60	61	57	29·50	29·38	80	80	S.S.W.	S.S.W.	Cloudy	—	Rain

The quantity of Rain in October was 36-100ths of an inch.

50, *High Holborn.* WILLIAM HARRIS and Co.

Al Communications and Books for Review to be forwarded (free of expense) to the Publisher, 356, Strand, near King's College.

THE

London Medical and Surgical Journal.

No. 146. SATURDAY, NOVEMBER 15, 1834. Vol. VI.

LECTURES ON THE THEORY AND PRACTICE OF MEDICINE,

BY WILLIAM STOKES, M.D.,

Delivered at the Medical School, Park Street, Dublin.—Session 1833-34.

LECTURE XLI.

Nervous Symptoms in Typhus—Opinions of Dr. Clutterbuck—Typhus not Symptomatic of Cerebritis—Occurrence of all Nervous Symptoms independent of any appreciable Lesion of Brain—Nature and Treatment of Headach in Fever—Delirium, Researches of Louis on—Its Treatment in the Early and Advanced Stages of Fever—Use of Wine and Opium—Nature of Adynamia — Principles of Treatment of the Local Inflammations in Fever—Errors of the School of Broussais on this Point—Use of Stimulation at certain Stages.

Gentlemen,—At my last lecture I enumerated the symptoms of typhus, which are referable to lesions of the nervous system. The principal of these are the occurrence of headach, the different varieties of delirium, coma, spasms, subsultus tendinum, and various lesions of sensibility. Now, you are all, I believe, aware that the followers of Clutterbuck place the seat of fever in the brain, or, in other words, they look upon fever as being symptomatic of inflammation of the brain.

This doctrine has acquired a considerable degree of interest, from the circumstance of being supported and put forward by such high authority, and is therefore entitled to our notice. It must, however, be admitted, that it does not rest on a very secure basis, for it has been contradicted by the results of the recent investigations with respect to the pathology of fever. These investigations prove, that lesions of the brain are in their nature analogous to those of other parts, and can no more explain the phenomena of typhus than similar affections of the lungs, or digestive system. It has been shown, in the first place, that lesions of the brain (which are supposed by Clutterbuck to be the cause of fever) are by no means constant in their appearance, that there is the most remarkable variety in their seat and extent, and that the appearances on dissection do not correspond with the symptoms observed during life. If we were to consider fever as symptomatic of disease of the brain, we should always expect to meet with lesions of the cerebral substance under such circumstances, just as we find proportional lesions of the lung in the fever of pneumonia, or of the digestive system in that of gastro-enteritis. Even in cases where these lesions of the brain are found to exist, we do not find that they are in proportion to the symptoms, for we may have severe delirium and headach in typhus with slight cerebral lesion, and, on the other hand, we may have extensive organic disease of the brain with a fever, in which the nervous symptoms are but little marked. Here, then, we have a character absent which should necessarily exist, if typhus was symptomatic of disease of the brain. Thirdly, the symptoms, referable to mere irritation of the nervous system independent of typhus, have not the initiative, for we frequently observe the symptoms of typhus to precede those which belong to irritation of the brain. A patient in typhus will go on for days without exhibiting any symptoms of cerebral irritation, and then, perhaps, towards the termination of his illness, will get symptoms of disease of the brain. But they are not the first link in the chain of morbid phenomena. Again, in cases presenting a similarity, nay, almost an identity, of symptoms, *you will meet with the greatest possible variety in the nature, seat, and extent of the organic alterations.* It has been farther shown, that with the same amount of nervous symptoms, with symptoms perfectly alike in their nature, intensity, and duration, we shall find one class of patients presenting remarkable lesions, and another class with none at all. Lastly, we meet with the same state of the brain in cases where no typhoid symptoms existed, as in those where all the characters of typhus were distinct and prominent.

Now if we admit the foregoing facts, and I think they cannot be denied, we must reject the theory of Dr. Clutterbuck. The lesions of the brain are by no means constant in typhus, the symptoms observed during life do not correspond with the phenomena of dissection, we may have extensive organic changes with modified symptoms of typhus, and severe typhus with slight organic change, and we may have, in patients presenting similar symptoms, great organic changes or none at all. The conclusion which has been come to by the most eminent pathologists of the present day on this subject is, *that, in fevers of an essential type, there is no single nervous symptom, which may not and does not occur independently of any appreciable lesion of the brain, nerves, and spinal cord; that the state of the nervous centres after death cannot explain the symptoms during life, and that the nervous symptoms in particular cannot be referred in many instances to any known organic alteration of the brain.*

This, gentlemen, is a conclusion which may appear humiliating, and you may think that it depreciates medicine by representing it as obscure, perplexed, and deficient. This, however, is not the proper way of considering the matter; you are only to inquire whether it be just and well founded or not, and then to steer as well as you can. We cannot say anything certain with respect to the nature of these and various other symptoms unconnected with any appreciable lesion of the nervous system; we merely observe them as facts, and find that they square with experience. Experience has shown long since that these symptoms frequently subside under treatment which could not be employed if they depended on inflammation. How could we explain the disappearance of delirium under the use of opium and wine, or the removal of spasms and subsultus tendinum by stimulants, if they depended on active inflammation of the brain or its membranes? This is another fact which tallies exactly with these already mentioned, and showing that the nervous symptoms of typhus are frequently unconnected with inflammation of the brain.

One general observation may be made with respect to the nervous symptoms of fever, that the greater their number and intensity are, the more unfavourable is the prognosis to be. I may here mention, that the worst description of nervous symptoms are persistent sleeplessness, constant headach, violent delirium, subsultus tendinum, and coma. All these point out profound lesions of innervation, and are met with in the worst cases of typhus. They do not point out the existence of extensive *organic* derangement of the brain, or that you should treat the case by means adapted to deplete the head, but that the fever is of a severe character, and that the shock which the system has received is likely to endanger life. Headach is one of the most constant symptoms of fever. It is sometimes partial, sometimes general; it may be more severe at one time than at another, or in one part of the head than the rest, and it may be dull, acute, or pulsative. It may or may not be accompanied by other symptoms, such as heat of the head, throbbing of the arteries, and the different varieties of delirium. In cases of fever where there is sympathetic headach, without any other sign of cerebral irritation, we are not at all warranted in looking on the case as one of disease of the brain. With other symptoms it may, and, consequently, under these circumstances should, command our attention, but alone it is to be looked upon as one of the general symptoms, or as symptomatic of some of those secondary affections which occur in the course of fever. When it is symptomatic, it is most generally connected with irritation of the digestive tube. There is nothing more common than headach in gastric fever, and you will constantly see this headach disappear after the application of leeches to the epigastrium. This I have witnessed, not in one, but in many instances.

Now, with respect to the treatment of the headach of fever, I may observe, that it must be more or less modified by circumstances. In mild and simple cases, where the pain of the head is not very severe, you may be content with cold applications, which you will commonly find to answer very well, particularly where the headach is accompanied by heat of the scalp and throbbing of the arteries. You will also find the warm foot-bath of service, and you may, if necessary, increase its efficacy by the addition of mustard. Where the headach resists this treatment, you must have recourse to leeching the temples and behind the ears, shaving the head, and applying cold or iced lotions. Now it might be urged here, that if the best mode of relieving headach is found to consist in the application of leeches and cold lotions to the scalp, are we not justified in concluding that the symptoms in these instances are to be looked upon as depending on inflammation? I have stated to you, when lecturing on diseases of the brain, that headach was not to be considered as connected in all, or even many cases, with arachnitis; and besides it does not follow that the symptoms must depend on inflammation, simply because they have been relieved by antiphlogistic treatment. What does the occurrence of pain in the head prove? Nothing more than this, that there is an excited condition, a deranged sensibility of the part affected. This derangement of sensibility may be accompanied or not by organic disease, but whether it is or not, experience has shown that it may be relieved by the use of local antiphlogistic means. I think you may lay this down as a rule, with respect to the pain of the head in fever, that where you meet with headach or delirium, and find them connected with other symptoms indicating a decided affection of the digestive system, you should seek for the cause of the headach in the sympathies

which attend irritation of the gastro-intestinal surface, and direct your plan of treatment accordingly. If a patient labouring under gastric symptoms, as red tongue, epigastric tenderness, swelled belly, and diarrhœa, complains of pain in the head, you may be pretty sure that the headach proceeds from sympathy, and that it will be most effectually relieved by leeching and other means calculated to relieve gastric irritation. There are two reasons for this, of all the secondary irritations of fever those of the digestive system are the most common; and they are, in the majority of cases, productive of more or less functional derangement of the brain, with which the gastro-intestinal mucous membrane is linked in the closest sympathy. I have seen cases of fever where the patient complained of bad headach, and where the symptoms were combated unsuccessfully from day to day by the application of leeches to the head, and yet I have seen complete relief obtained by putting a few leeches to the epigastrium. If, therefore, you find, in cases like this, pain on pressure, tympanitis, diarrhœa, thirst, and other signs of irritation of the digestive tube, you will direct your attention to the belly and see whether the headach may not be removed by means adapted to subdue gastric irritation. What I wish to impress on you is this,—that secondary gastric disease will produce headach, and that this may be removed by applying leeches to the belly.

We now come to speak of a very important symptom in fever,—delirium. I believe I may here assert that the same pathological observations apply to this symptom as to headach, and that, taken alone, it cannot by any means be looked on as a decided indication of actual organic or inflammatory disease of the brain. Before I enter on the subject of delirium, I wish to make a few remarks on the occurrence of hysterical symptoms in fever. In some persons, you will find that, at the commencement of fever, fits, like those of hysteria, will come on, and this may happen even in the case of robust men. One of the worst cases of fever I ever saw was ushered in by these symptoms. The patient had violent fits of laughing, crying, and other symptoms of an hysteric character, and these were succeeded by profound typhus. Indeed, the complication of hysteria may be looked upon as favourable in all cases except fever; but the occurrence of hysterical symptoms at an early period of fever affords grounds for making a bad prognosis.

In fever we meet with two kinds of delirium,—the violent, and the low muttering delirium. The high and violent delirium is a disagreeable symptom, from the unmanageable state of the patient and the difficulty of doing anything for him. It is most commonly observed in the commencement of the disease, whereas the low muttering kind is generally observed towards the termination. This is the most usual way, but sometimes the reverse takes place, and when this occurs, it is to be looked on as dangerous on this principle, that any departure from the ordinary course of things is unfavourable, and gives cause for a bad prognosis in fever. Thus the occurrence of low muttering delirium in the commencement, or of the violent kind towards the termination, of the disease, is always alarming. Low delirium is most frequently observed towards the close of fever, and we find it always accompanied by other symptoms indicating a low and prostrated condition of the system, as subsultus tendinum, picking of the bed-clothes, involuntary stools and urine, hiccup, and cold extremities.

Let us consider how far we are to consider this symptom as connected with actual disease of the brain. Louis, who has devoted a considerable share of his attention to this point, has examined carefully the state of the brain in twelve fever patients who had little or no delirium, and in twelve others, who died with violent delirium, and the following are the results of his experience. In the first table he places those who had no delirium; and here we find, that in four cases there was some redness of the cortical substance of the brain; in one inflammation of the optic thalamus; in one slight softening of the brain, and in the remaining six the cerebral substance was quite healthy and normal. Now, in the cases where violent delirium was present, the following circumstances were observed. In five cases the morbid appearances were slight, there being some redness and vascularity of the cortical substance, but no more; in one there was slight ramollissement; in one livid injection of the brain and its membranes; in the remaining five the substance of the brain was of a natural colour and consistence, and appeared to be quite healthy. Now in these two tables you will observe that the difference in the morbid appearances is extremely slight, and that the presence or absence of delirium seems to have very little connexion with the perceptible state of the brain. In those cases where there was no delirium, we find four patients presenting redness and vascularity of the cortical substance; in those which were attended with violent delirium, we find five patients similarly circumstanced. In the cases without delirium, there was one with inflammation of the optic thalamus, and another with ramollissement; in those where violent delirium prevailed, there was one with ramollissement, and another with dark venous congestion of the brain and its membranes. In the first table, where delirium was absent, we find six cases in which the brain was to all appearance healthy and normal; in the second table we find five cases similarly circumstanced. Recollect, too, that these observations were made by one of the most accurate pathologists in the world, a man who had no theory to support, who merely records what he has seen, and whose statements are therefore entitled to the most complete credence. With

respect to induration of the brain, M. Louis remarks that he has met with it in two instances of fever; in one the patient was delirious; in the other the mental powers were unaffected. In the Clinique Medicale of M. Andral, we find that he has observed induration of the brain to be connected with stupor and coma. Thus we see that in one case this state of the brain is found in connexion with delirium, in another with stupor, and in a third with no appreciable lesion of the intellectual faculties. The conclusion, then, which we must come to is, that inflammation of the brain does not necessarily imply delirium, nor does delirium imply any certain disease of the brain.

In the foregoing tables, we have a healthy state of the brain with delirium, and a morbid state without it. Observe the practical deduction to be drawn from this. You might suppose that you could draw no conclusion from this which would not have a tendency to embarrass your practice, and depreciate the value of medical science. This, however, is not the fact. The conclusion is an obvious and a just one, that, in the treatment of a case of delirium, *we are not to expect that we shall be always able to remove this symptom by treatment calculated to relieve inflammation*, because it may occur with or without disease of the brain. Whenever you meet with a case of delirium, you should carefully investigate its nature and origin, as far as you possibly can, and if it be probable that lesion of the brain is going on, you should direct your treatment to the head; but if it be merely sympathetic, you must look for its source elsewhere, and regulate your treatment accordingly. You cannot always relieve delirium by antiphlogistic means directed to the head. This is an undoubted fact, and squares with what has been stated with respect to headach, for we find that delirium is frequently removed by measures which would be quite inadmissible if it depended on actual inflammation of the brain. In all cases of febrile delirium, where it is accompanied by pain of the head, heat of the scalp, throbbing of the arteries, and other signs of determination of blood to the brain, you should not neglect the employment of local depleting means. For this purpose you may use with great advantage the cold affusion, as recommended and practised by Dr. Abercrombie. I have seen patients who were for nights without sleep, and in whom the delirium was so uncontrollable that the strait waistcoat was necessary, and I have observed that those persons slept soundly and tranquilly after the cold affusion. In cases of high delirium with strong reaction, the use of blisters has been recommended. This practice appears to me to be questionable and hazardous, and I feel convinced that they very often do mischief. A much better practice is that of applying sinapisms to the feet. The strait waistcoat is a measure very frequently adopted in the treatment of delirium, but it is one which you should be cautious in employing. It is too generally resorted to from apprehension on the part of the attendants, and is continued through mismanagement. In Dr. Cheyne's valuable report on the epidemic fever of Ireland, he remarks, that some patients have perished from exhaustion in struggling with their attendants, or in endeavouring to free themselves from the restraint of a strait waistcoat. If a patient gets out of bed and walks about the room, there is not the slightest risk of his receiving any injury, provided he be properly covered. When he endeavours to get out of bed, the nurse should calm him if possible, and, if he perseveres, use her authority over him, but never resort to violence. She should even permit him to put on his clothes, sit on the side of the bed, or walk about the room, and wait until the violence of the delirium abates. This generally occurs in a short time, and the poor patient becomes quite amenable. Such are Dr. Cheyne's views. I believe, firmly, that the strait waistcoat is too often abused. Coercion should be used only in extreme cases, and where there is danger of life; and it should be dispensed with on the first opportunity.

In the advanced stage of fever, even where delirium is present, I believe we may often give wine with advantage. I have seen the tongue, which was dry and black, or red, become pale and natural under the use of wine, opium, and other stimulants. This tallies exactly with what I mentioned *as to the tongue being rather an index of the state of the whole system, than of any particular condition of the intestinal canal.* With respect to the use of wine, Dr. Graves remarks, that it is a common opinion that wine should not be allowed while the patient's eyes are red and suffused. He is of a different opinion, and thinks it may be often given with safety and advantage even in this state. "It should be borne in mind," says Dr. Graves, (and this is important) "that want of sleep will make the eyes red and suffused, and, this being very common in fever, it cannot be brought forward as an argument against the use of wine. Neither does hot skin contra-indicate the use of wine, particularly when there is at the same time a tendency to coldness of the extremities." Now, to come to the subject of delirium, so far as this is connected with giving wine and stimulants, or withholding them, Dr. Graves thinks, that when the delirium is violent wine should not be given. I would modify this assertion, and say, that it should not be given in the delirium which comes on at an early period of fever: but in the advanced stage I have seen it do good. The patient may be irritable, restless, and delirious, and yet in a state which demands the use of wine and opium. You will find patients in the advanced stage of fever talking incoherently, and incapable of giving direct answers to your questions. This state of mind is frequently accompanied by an anxiety about their illness,

and want of sleep. Now, to procure sleep and remove the delirium, you will have recourse to the use of wine and narcotics. "Headach," says Dr. Graves, "is, at any period of fever, a bad circumstance; for it does not allow the patient any sleep. Now, we must, in the first place, endeavour to remove this symptom, by depleting the head and by purgatives. These measures frequently succeed, but sometimes they fail, and we cannot pursue this line of treatment any further. (This is the case to which I have already alluded.) In this case," says he, "we must prescribe an opiate to procure sleep, and from this sleep the patient often awakes much improved. Before you employ the opiate, you may apply a blister to the head." Much benefit may be derived from the use of the common starch injection with tincture of opium. Thirty or forty drops of laudanum in two or three ounces of the mucilage of starch is a very good way of employing opium to procure sleep in fever. The general rule with respect to the use of opium is this: *Where you have nervous symptoms remaining after treatment calculated to remove inflammation, or where they have occurred unaccompanied by any signs of inflammation of the brain*,—in these cases I feel no doubt that opium may be employed with safety and success: in fact, that it is the best means you can adopt. Observe, all that I now state is founded on facts, and independent of any theory. You will observe, too, that it squares with the pathology of fever given in a former lecture, namely, that we are to look upon it as a general affection of the whole system; and that the presence of any one single symptom does not necessarily imply the existence of local inflammatory disease. There is one practical remark with respect to local inflammation which I have already made, but I shall here beg leave to repeat, as it is connected with the point in question. When we compare the three great cavities with respect to the comparative frequency of inflammatory disease observed in them, we find that the account stands as follows:—local inflammatory disease is most frequent in the belly, next in the chest, and lastly in the head. We much more frequently meet with organic affections of the digestive system in fever, than of the pulmonary, and of the pulmonary than of the nervous.

In the advanced stage of fever, we have often to combat with a very distressing symptom, namely,—coma. The patient lies in a state of lethargic stupor, and cannot be roused, or, if he exhibits any signs of consciousness, it is only for a moment, and then he relapses again into the same stupid state. This is a bad symptom, but not a fatal one if it be properly managed. What seems to answer best is, keeping the head cool, and using counter-irritation. These two measures may appear inconsistent with each other, but they are not really so. Some of the worst cases of febrile coma, which I have seen recover, were those in which blisters were applied to the back of the head, or vertex, or nape of the neck, the rest of the head being kept cool. In addition to these measures, you may employ counter-irritation to the extremities with advantage. You will see, in the works of Lallemand and Mackintosh, some very remarkable cases of coma, where the patient was, as it were, snatched from the jaws of death by pouring boiling water on the extremities, at the same time that the head was kept cool. In the advanced stage of fever, where the skin and extremities are cool, the existence of coma does not contra-indicate the use of wine. You may also employ musk in doses of ten or fifteen grains every third hour, either alone, or in combination with camphor, or carbonate of ammonia. These with blistering the head and keeping up counter-irritation in the lower extremities, are the principal curative means used in the treatment of coma. I shall conclude this lecture with some observations on adynamic fever. Whenever you meet with this remarkable prostration of strength, it will be necessary for you to inquire carefully into its nature. You must here bear in mind two propositions which should never be forgotten,—1st, that the adynamia may be secondary and produced by visceral lesions, for the removal of which antiphlogistics may be necessary; and, 2ndly, that it may exist as a consequence of the morbid state of the whole system and independent of any decided local inflammation. The first of these is called false, the second true, adynamia. One of the most important questions in fever is connected with this point, and I beg your particular attention to it. It was long taught, and is to a certain extent still believed, that fever is a disease of debility; and hence all the phenomena indicative of this debility were treated by stimulants; and it is melancholy to reflect that, even at the present day, hundreds of persons are sacrificed at the shrine of this dogmatism. Now, when you recollect that fever most commonly presents a group of local inflammatory affections, and that the excess, or extent, or seat of a local inflammation will produce debility, you will very readily perceive that there are two causes for the adynamia of fever,—one the reaction of local disease on the constitution, the other depending on a peculiar morbid state of the whole system; and it is in striking a balance between these two causes that the judgment of the physician consists, and it is on the accuracy of his judgment that his success will decidedly hinge. In all cases where the prostration is unconnected with inflammation, or, even if inflammation should exist, where antiphlogistics can be no longer employed, you must have recourse to the cautious but decided use of stimulants. In some cases, particularly where the prostration is not excessive, you may, at the same time that you are prescribing stimulants, employ local antiphlogistics and counter-irritants with great advantage. When I say

this, I do not wish you to believe that in treating the inflammatory affections which arise during the course of fever, you are to proceed with the same boldness as in original simple inflammation. I have before marked the distinction between them. In the secondary local inflammations of fever, where profound lesion of innervation and a morbid state of the fluids exist, you should always modify the activity of your antiphlogistic measures; but, on the other hand, where the local inflammations are simple, and the constitution strong, your measures must be prompt and energetic. There is one great rule which is applicable to most fevers:—In the early stages, antiphlogistics are required; in the advanced, stimulants and tonics. This rule applies not only to fevers, but also to most cases of local diseases. In the early stage of fever, you may always employ the antiphlogistic treatment so far as regimen, local depletion, and the prohibition of all stimulants are concerned; in the latter periods, where the patient's strength is reduced from depletion, extent, or duration of disease, and want of nutriment, your object must be to support the strength, and even to give stimulants. This is the great point which has been overlooked by the school of Broussais. They looked upon fever as depending on local inflammation, and concluded that stimulants were inadmissible *at any stage of the disease;* and their practice was accordingly to continue the use of antiphlogistics throughout the whole case. By thus neglecting to support the system, they permitted exhausted nature to sink, ignorant of the fact, that while you are taking measures to remove local inflammation, you may at the same time give nutriment to support strength, *and that at certain periods of all inflammatory affections stimulants become antiphlogistics.* The same thing occurs in local inflammation of a simple and original character, as in fever. In healthy inflammation we cannot pursue the antiphlogistic plan all through; after a certain period it loses its effects on the local disease, and it will run the patient down if persevered in; a cure is to be obtained only by the use of stimulants and tonics. So it is with respect to fever, in the advanced stage of which stimulants become antiphlogistics. The great rule, then, with respect to the treatment of adynamia is this:—First ascertain if there is any existing local inflammation, and if it be of sufficient extent and intensity to produce prostration, adopt means to modify or remove it, as far as your patient's strength will permit; in the next place, if you find no local inflammation to account for it, or if it occurs at an *advanced stage,* when the powers of life are sinking, give wine and stimulants to support nature in the struggle which she is making with disease. In the treatment of the secondary local inflammations which arise during the course of the fever, we should always endeavour to moderate the symptoms as far as we can and gain time. If we can succeed in prolonging life, we give our patient every chance for recovery, and allow the powers of nature time and opportunity to act. Hence it is that one of the most important objects of the physician, in the treatment of the advanced stage of fever, is to prevent his patient from becoming too much debilitated. Even though local inflammations should be present, yet, if the patient be sinking and the fever of considerable duration, he knows that his only resource lies in judicious stimulation, which I fully believe not only acts beneficially on the general fever, but also on the local disease, whatever it may be. In all probability the original affections have changed their character, and the irritated capillaries have passed from a sthenic to an asthenic state; in other words, to a state where antiphlogosis will be, to them, insufficient, and, to the disease, dangerous, but where stimulation is their cure, and also what nature demands. The great point is to know the exact time when we should change our practice. This period occurs in all fevers, but the time of its supervention is infinitely various; and it is in the knowledge of this, as well as in striking a proper balance between the dangers to be apprehended from local inflammation on the one hand, and constitutional debility on the other, that the great nicety of treatment consists. It would be impossible to teach this in a lecture; the only way in which it can be learned is by exact and long-continued clinical observation.

LECTURES
ON
MIDWIFERY & THE DISEASES OF WOMEN AND CHILDREN,

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Delivered at St. Thomas's Hospital.

LECTURE VII.
Imperforate Vagina.

Gentlemen,—At my last lecture I told you that, after the consideration of nymphomania and sterility, it was my intention to proceed to the organic diseases of the female generative organs. There is, however, a subject of great practical importance, which, although it does not exactly come under the head of organic diseases, in the common acceptation of the term, yet is so near akin to them as to require me to make some observations upon it during the present lecture; I mean *imperforate vagina.*

An impervious state of the vagina is one of those affections to which females are subject, which, through carelessness and neglect, is frequently overlooked during infancy, or, through a false notion of delicacy, concealed from the practitioner until serious inconve-

nience is the result, and much suffering produced. "An imperforate anus," says M. Horn, in Schmucker's Chir. Schriften, "is much more easily detected in a new-born child than an imperforate vagina. I have seen a case where the urethra, as well as the vagina, was impervious. When, however, no difficulty in passing water is perceived in a new-born child, the attendant is generally satisfied, and seldom thinks of examining further; but that species, where the vagina becomes imperforate after birth, and generally in children above a year old, is of much more frequent occurrence."

The congenital imperforate vagina presents itself under different forms; sometimes the os externum is entirely closed by the hymen, which is preternaturally thick and firm. This membrane is occasionally situated so anteriorly in new-born children, as to cover the orificium urethræ, and thus obstruct the evacuation of the urine. Under these circumstances children have repeated fits of screaming, from the violent straining to pass water; the napkins are not wetted; at last the abdomen begins to swell, and convulsions occasionally follow. Ocular examination of the part easily discovers the defect.

Where the membrane is situated behind the orifice of the urethra, it escapes notice for some time; but when the menstruation commences, and where the os externum is completely closed, the menstrual blood, being prevented escaping, collects in the vagina, and produces much local and general disturbance; an examination is at last instituted, and in this case the membrane is easily discovered. The symptoms here are generally pain in the back, with a feeling of bearing down, tension and weight in the parts, swelling of the abdomen, a frequent call to empty the bladder, and sometimes even complete retention of urine, the fæces are passed with difficulty, &c.; the menses, moreover, have not yet appeared, although the patient is of an age when this discharge ought to have come on. These symptoms at first appear every four weeks, continue some days and then disappear, probably from the blood which had been effused into the vagina being again absorbed. At last, however, it collects in the vagina, and now they become constant, experiencing exacerbations. By degrees, general disturbance of the health follows; the spirits are affected, the face becomes pale, the abdomen swells and is painful; she complains of vertigo and sleepless nights, and has a frequent inclination to bear down, as in labour, &c. Examination per vaginam quickly detects the source of these symptoms. If the membrane be not very thick and firm, it becomes so distended and protruded by the collection of menstrual fluid, that it appears between the labia like a pouch filled with blood. Where the necessary examination has been neglected, this affection is easily mistaken, from the patient being of an age at which the menses ought to make their appearance, and from the symptoms coming on or increasing every four weeks, the practitioner is easily led to suppose that they are produced by a state of general debility, and prescribes a variety of means for bringing on the discharge, which not only fail to relieve the symptoms, but aggravate them, and even induce a state of actual danger, thus showing how necessary it is to make a vaginal examination, which precludes all chance of error. Cases have occurred where, after the real nature of the disease had not been discovered for three or four years, the operation has been performed with a successful result, and several pounds of blood evacuated.

The danger, however, is much increased where the operation has been delayed some time; for, where the blood collects in such quantity that the vagina can no longer contain it, it distends the uterus, and finds a passage, through the Fallopian tubes, into the cavity of the abdomen. There is always reason to fear this when the abdomen swells considerably, and the patient feels a degree of forcing like labour pains. It has been also observed where the evacuation of the catamenia by the usual passage has been too long obstructed, that nature often chooses an unusual outlet, which she continues to make use of, although the proper passage has been laid open. In a case of this sort, the menstrual fluid was discharged by the lungs and kidneys, and continued to be evacuated in this manner, although the operation was performed.

In performing the operation, the patient should lie upon her back, with the thighs separated, and the labia and nymphæ held asunder by assistants. The membrane must be divided by a longitudinal incision from the urethra towards the rectum, taking care not to injure these parts. If the membrane be very thick, firm, and tough (and cases have occurred where it was several lines in thickness) a crucial incision, or even amputation of the labia and nymphæ will be necessary. If it be thin, a simple longitudinal incision will be sufficient. A small tent should be introduced for a day, to prevent a reunion of the parts. When the membrane is divided, a thick, black blood, without any smell, is discharged. This must be completely evacuated, by straining or coughing in the upright posture, or, if necessary, by injection; for if any portion remain in the passage, it soon becomes very putrid and offensive.

Occasionally the membrane is perforated, so as to permit a sufficiently free escape for the menstrual fluid, although it is both thick and firm. Under these circumstances it will not be easily discovered until sexual intercourse has taken place. In some cases it has one or more small openings, through which, although the menses flow, it is slowly and with difficulty; and this form of imperforate vagina may be mistaken for dysmenorrhœa or scanty menstruation. In some cases the en-

trance of the vagina is not closed by a membrane, but its sides are so grown together, as to leave no trace of the passage. There is a small opening from which the urine flows, and a median line, like a cicatrix, extends from it in a direction downwards, which may be distinguished from the adjacent parts by its white colour and greater firmness. This state of parts is sometimes congenital, but at others is the result of neglected excoriations, &c., in children. In some cases the orifice through which the urine flows will admit of a director being passed into the vagina, so that the parts may be divided in the above-mentioned line. But if this cannot be done, an incision must be made from without inwards, and gradually carried deeper, carefully avoiding any injury to the rectum and urethra. In other cases we find merely a preternatural adhesion of the nymphæ; this is generally soon detected, because the stream of urine usually jets out in a horizontal direction. This form of imperforate vagina is very easily cured, the nymphæ being usually separated from each other with great facility *. This is, perhaps, the most common form of imperforate vagina which the practitioner is called upon to treat in young children, for, generally speaking, it is more easily discovered than the other species. It is frequently produced by an excoriated state of the parts, and I have occasionally seen it the result of ulceration from small-pox pustules or varicella. The adhesion is sometimes so slight that it may be removed merely by separating the labia and nymphæ with the fingers.

The entrance of the vagina is sometimes closed by a preternatural mass of flesh. In one case it appeared to arise from the inner surface of the labia, leaving a small orifice near the clitoris, through which the urine flowed; a probe could be passed through this opening into the bladder, but not into the vagina. An incision was made through this mass into the vagina, the divided portions of fleshy substance were removed from each side, the wound bled but little, and the patient soon recovered.

In some cases the obstruction is not at the os externum, but higher up, in the vagina itself, and is not so readily detected as in the former species. It occurs under different forms; sometimes the vagina is crossed by oblique bands or septa; these are usually produced by inflammation of the vagina after difficult labours, or from any other cause. An obstruction of this sort causes no other inconvenience beyond pain during sexual intercourse; it is easily detected by examination, and merely requires to be divided by a pair of blunt pointed scissors introduced along the finger. A preternatural membrane sometimes closes the vagina entirely; the higher up the canal this is situated the more difficult are the diagnosis and operation; these are at times facilitated by the menstrual fluid, which collects behind the obstruction, presses it forwards, and distends it. When the septum is very far up the vagina the catamenia not only collects in the back part of the canal, but also in the uterus, and even distends the Fallopian tubes, and escapes into the abdominal cavity with fatal result. Cases have occurred where the tubes have been actually ruptured. Where a septum of this sort has an opening it will not be discovered at all, but where it is strong and firm, and not timely discovered and divided, it either retards labour or produces a rupture, with troublesome consequences.

A young woman complained of much inconvenience in the vagina, and difficult menstruation at every period. She was examined when menstruating, and a tumour was found upon the os externum as large as a hen's egg, attached to the side, being small inferiorly, but becoming broader upwards. On pressing it with the finger, a quantity of fluid as well as coagulated blood escaped from the vagina, and the tumour disappeared. Upon further examination, it was found to arise from a pouch or sac attached to the sides of the passage, having a tolerably wide opening above, with its fundus directed downwards, so that at every menstrual period a portion of catamenia passed into the sac and distended it. It was formed by a thick tough membrane, which it was proposed to divide longitudinally, and thus remove the source of irritation, but the patient could not be induced to submit to the operation. Whenever the catamenia appeared she relieved herself by introducing a pessary into the vagina, which pressed upon the part, and thus prevented its being distended. At last she became pregnant; the membrane retarded the labour for some time, but at length ruptured; inflammation and mortification followed with a fatal result.

The worst case is where the walls of the vagina at one spot are completely united, and cicatrised. This is usually the result of a severe labour, where the vagina has been more or less torn, and where inflammation, ulceration, and gangrene have been the consequences. The vagina may also be rendered impervious in a similar manner by other species of abscesses, where a proper use of a tent or bougie has not been attended to. In a case of this sort, the vagina feels very hard at the point of obstruction, so much so, that no fluctuation can be felt even where the menstrual fluid has collected in considerable quantity behind it; but, upon examination through the rectum, where it is not too high up, the vagina will feel constricted, and beyond the stricture a distinct fluctuation of the collected menstrual fluid may be felt. With respect to the operation, much depends upon the extent of the obstruction; if it be short, which may sometimes be very easily ascertained by the finger in the rectum, it will not be very difficult. The main point is, neither to injure the rectum nor the bladder, and give the instrument with which the open-

* Richter.

ing is made such a direction that it shall exactly reach the pervious portion of the vagina behind. The most convenient for this purpose is a lancet; it should be introduced into the stricture so that the edges of the blade are directed towards each side, in order to avoid injuring the urinary passage before and the rectum behind. As to the direction in which it must be carried, the operator must be guided by his anatomical knowledge, and by his finger in the rectum. Generally speaking, the moment that the obstruction is divided a quantity of thick, tough, pitch-like blood escapes: it is usually without smell, but occasionally is excessively fetid. It is an important rule to remove all the blood which has collected in the passages, because, if any remain, it soon becomes so putrid and offensive as to act very deleteriously upon the whole system. In cases of this sort it is not always easy to remove all the blood, from the size of the opening being inconsiderable and the blood very tough. In order to do this effectually, the patient must walk about, and should cough or bear down, the abdomen should be pressed upon, and the finger frequently introduced into the opening to dilate and clear it as often as the discharge stops. Injections are of much service, and should be repeated until they flow without colour. The artificial opening is always small and rigid, because the edges of the incision become hard and callous. Bougies of increasing thickness will dilate it in some degree, and thus form a sufficient opening for the escape of the catamenia, and through which the patient may even become pregnant; but, whether or not, labour can be completed without danger, as will be seen from the following case.

A woman, in whom such a degree of contraction had taken place in the vagina from gangrenous ulceration, in consequence of severe labour, as scarcely to admit a quill, became again pregnant; the vagina, where the stricture was, had become so hard and apparently cartilaginous, that it seemed incapable of undergoing any degree of dilatation whatever, and, by means of a catheter, this appeared to be the case throughout its whole extent. Every means for softening and dilating the part which had been employed during pregnancy had so entirely failed, that, although strong and continued pains had already come on, the vagina as far as the os uteri was so contracted and rigid, that the medical attendant, after using considerable force, could only introduce his little finger. He however ascertained that the os uteri was dilated, and the membranes distended with liquor amnii. An incision was now made to the depth of half an inch on each side of the contracted canal; much hæmorrhage followed, with the effect that, although the bladder of membranes did not descend lower, it became larger, and burst in a quarter of an hour afterwards. The head followed immediately in its place, but here it remained without stirring for the space of nine hours, despite of the most powerful pains. As it appeared impossible that the head could be expelled by the action of the pains alone, fresh and deeper incisions were made round the vagina, by passing a slender blunt-pointed bistoury along the inner side of either hand, as occasion required. During an interval of pain the instrument and finger were introduced between the callous vagina and head of the child, which pressed tightly upon it. In this position the operator waited until a pain came on, when, turning the knife, he made an incision. In this manner eight incisions were made, some of which were an inch in depth. Most of them bled severely, until the head descended, and, by pressing upon the divided vessels, stopped the hæmorrhage, it was at last expelled. The reason why the incisions were always made during a pain was partly for the purpose of observing more correctly the effect they produced while the vagina was distended by a pain, and partly to lessen the patient's suffering, who was not sensible to the cutting of the knife at this moment.

In another case where the woman had been for some time in labour, the vagina was found so contracted that it would scarcely admit of two fingers, the callous part, which formed the stricture, was so stretched by the head during a pain, that there was much reason to fear laceration, an incision was therefore made at the side, and the head descended immediately; a smart hæmorrhage with syncope rendered the application of the forceps necessary, but the mother recovered completely. Where a considerable extent of the vagina is *completely* impervious and cicatrised, so that there is no trace whatever of an opening, it becomes very difficult, and even impossible to form a passage; where the patient is no longer young, and the catamenia have already stopped, there is little need of an operation, but where this discharge still continues, and, therefore, where the menstrual fluid cannot escape, what is to be done? If the finger, when passed up the rectum, can detect the portion of the vagina beyond the obstruction open and distended with blood, the question is whether we ought not to introduce a trocar along the finger, and thus make an artificial passage from the vagina into the rectum? In cases of this sort where art can give but little assistance, we occasionally see that nature finds a means for evacuating the menstrual fluid. In a woman aged 45, in whom the vagina was completely impervious from the effects of a severe labour, an abscess formed in the lower part of the abdomen every month, from which the catamenia flowed.

That there are, however, cases where the walls of the vagina have been completely united for a considerable extent, and where the surgeon *can* restore the natural passage is shown by the following case, which is also interesting in other respects. A young woman, aged 20, had a hard anormal tumour of the abdomen below the navel, and another smaller one

about the size of a hen's egg at the left side, and moreover an anormal configuration of the external generative organs; instead of a vagina there was a blind passage about half an inch long, admitting the tip of the finger, the extremity of this passage was completely closed and felt hard and firm; the patient complained of pressure and weight in the region of the pelvis and loins, with pain in the hips, want of appetite, shortness of breath, quick pulse, constipated bowels, frequent desire to pass water, which came only in drops, and with much pain. These symptoms at times diminished, at others they increased; the two abdominal tumours, which were evidently seated in the uterus and ovary, swelled with every attack of pain, and their increase of size was in proportion to the severity of the symptoms. As the former appeared to be the uterus distended by a quantity of retained catamenia, a lancet was plunged into the fundus of the above mentioned blind passage, and after penetrating to the depth of two inches, the catamenia made its appearance; it was thick and without smell. When about four pounds had been evacuated, the discharge stopped, the abdominal tumours had diminished considerably, but not entirely disappeared, As the patient the day after the operation, was attacked with pain in the back and swelling of the abdomen, an emetic was ordered; this brought on a copious discharge of bloody fluid, which was followed by an immediate disappearance of all the symptoms, as well as the abdominal swellings.

The *os uteri* also is sometimes closed; it occurs either as a congenital anormality, or takes place from some cause or other during life. It is produced either by a preternatural membrane, or by an actual union of the edges; the latter form is the most frequent, and usually results from difficult labours, where the os uteri has been inflamed, lacerated or ulcerated; it is also met with occasioaally as a congenital defect. In cases of this sort, where the catamenia is secreted into the vagina instead of into the cavity of the uterus, no injurious consequences will result, beyond that the patient will remain barren. Where, however, the catamenia is secreted by the uterus as usual, this collects and distends it. Upon examination per vaginam, the uterus will not only be found distended, but sunk deep in the vagina. The fundus may be felt above the pubes, and upon laying one hand upon the abdomen, and introducing a finger of the other into the vagina, we shall be able to raise or depress it at pleasure. The case may terminate in one of two ways; either the menstrual blood is absorbed, or it finds a passage through the Fallopian tubes into the cavity of the abdomen. As soon as this takes place, the local symptoms which had been produced by the distension of the uterus disappear, the abdomen swells and becomes painful, the breath becomes fœtid, fever and death follow. Where the os uteri is closed by a membrane, this frequently gives way, when a certain quantity of blood has collected in the uterus, the blood escapes, and thus effects a natural cure. We have reason to suspect the os uteri is closed when the patient is of an age when the catamenia ought to have appeared and have not, where the uterus is enlarged, and where the above-mentioned train of symptoms appears without the existence of any obstruction in the vagina. The state of the os uteri externum will be ascertained by the finger, of the os uteri internum by a probe.

An operation is the only means of affording the patient any relief; where the uterus is distended with blood, it is felt as low in the vagina as in pregnancy, so that the os uteri can be easily reached and opened; but when the menstrual fluid has already escaped through the Fallopian tubes into the abdominal cavity (and consequently the uterus being no longer distended is now high up in the pelvis) the operation will be attended with serious difficulties, and is, in all probability, too late. Where the uterus is distended, the cervix shortened, and the os uteri merely closed by a membrane, the operation may be performed with the utmost facility and safety. This may be done by means of a curved trocar passed up along the finger, and pushed through the membrane. Where, however, the os uteri is completely united, the opening must be made by a lancet, in which case a crucial incision is generally necessary; this may be done by using a trocar with a split canula, into which a bistoury may be introduced when the trocar is removed, and thus the incision made.

The question is whether this can be done without danger. Cases have been recorded where the operation has been followed by violent inflammation and death; on the other hand there have been cases where it has been performed with a successful result. Injections should be used after the operation to wash away the blood, for the discharge is easily checked, and an elastic tube introduced to prevent the opening from closing. Cases have actually occurred where the opening has healed up, and where the operation had to be performed a second time*.

LECTURES

ON

FORENSIC MEDICINE,

DELIVERED BY

DR. HAY GRAHAM,

At the Westminster School of Medicine.

LECTURE V.

Impotency.

GENTLEMEN,—I now proceed to treat of im-

* Richter.

potency and sterility, two subjects which, however frequent in occurrence, are, from that feeling of delicacy every well regulated mind ought to possess, seldom submitted to medico-legal investigation. Previous to entering into their medical history, I shall, as usual, commence with their legal consideration.

Impotency, though not frequent in either sex, is comparatively more rare in the female. In the male it denotes an incapacity to consummate, which consummation consists in "erectio ac intromissio penis cum emissione seminis." In the female, impotence is generally limited to an impervious vagina.

As a cause of divorce it must be proved to have existed previous to marriage; that consummation has not taken place, and, should the wife have been a spinster, that she is *virgo intacta*, although *apta viro;* in this case the contract is null and void *ab initio*. It is laid down by the editor of Blackstone, that when corporal imbecility arises after marriage, the marriage is not vacated, because there was no fraud in the original contract, and one of the ends of marriage, viz. the legitimate procreation of children, may have been answered.

As the medical jurist may be called on to decide on the subject of impotency, 1st, in a suit of divorce; 2ndly, in an accusation of rape; and, 3rdly, in a disputed case of parentage on either side, we will briefly consider the various causes from which it may arise. These causes will be found to be either physical or moral, and may proceed, 1st, from some organic lesion, as the absence, the imperfection, or the diseased state of the organs of generation; 2ndly, from some impediment or irregularity of the emission of the seminal fluid; 3rdly, from the want of the power of erection in the penis.

1st. Many authors have asserted that the absence, either congenital or accidental, of the penis, is necessarily accompanied with impotence. When treating on the subject of the violation of virgins, I shall bring forward sufficient proof to satisfy you, that as the law has decided intromission not to be necessary to constitute the crime of rape, neither is it necessary towards impregnation, for pregnancy has frequently occurred where the *hymen* has not been perforated *hastâ virili*, and where intromission consequently could not have taken place. Indeed there is a recent case, which you may recollect to have seen in the police reports, where a young married woman, in a fit of jealousy, concealed a razor, with which she removed her husband's penis whilst *in coitu*, and which she most completely effected close to the pubis. Notwithstanding the hæmorrhage he recovered, and some time afterwards cohabited with another young woman, with whom he illegally intermarried. His first wife having expressed much sorrow and repentance for her fault, he subsequently returned and lived with her, on which desertion, his second wife appeared before a magistrate to affiliate a child to him, of which she was pregnant. In this case there could have been no intromission into the vagina, since there was nothing to intromit.

"In some malconformations, the ureters are found terminating in the perinæum or above the os pubis; sometimes the penis is impervious, or there is curvature, a scirrhous state of it, or a paralytic one, induced by injury to the nerves or muscles of the parts, an unnatural termination of the penis, the extremity of the canal of the urethra terminating at some other place than its natural situation, and are therefore causes of impotence. Belloe relates a case where the ureters terminated at the bottom of the frænum; the man had four children resembling himself, and, what is still more remarkable, two of them had the same malconformation. Much, in such cases, must depend on the distance the orifice is thrown back; if very far, there is every reason to believe the marriage would be unfruitful."—*Bech.*

The absence of the testes, or a diseased state, arising from atrophy or cancer, so that they cannot perform their functions, necessarily causes impotence. But it does not follow that, because the testes may never have descended into the scrotum, the individual should be impotent; on the contrary, such are generally reputed more vigorous in this respect than others.

2nd. Many causes may give rise to an impediment in the emission of the semen masculinum. Sometimes the cavity of the urethra is so much contracted and compressed by the spastic violence of the erection, that the seminal fluid cannot pass out, and issues only when the erectile turgescence of the penis has diminished. A stricture of the urethra may produce so much contraction as not to allow of its escape, or may obliterate the orifices of the canals through which it is conducted into the urethra.

3rd. The want of power of erection in the penis proceeds from impotence in the nervous system. Anaphrodisia, or the absence of venereal desires, may be either naturally brought about by old age, or produced accidentally from different causes, and is either permanent or temporary, relative or absolute. This absence of desire sometimes extends even to aversion and antipathy towards the sex. Dr. Gall, who considered the cerebellum to be the organ of physical love, or the seat of the instinct of propagation, attributed this absence of desire to the want of development in this organ. But indifference for the sex more frequently proceeds, in man, from the absence or the atrophy of the testes, which, according to this celebrated author, brings on a sort of atrophy, or, at least, a diminution in volume of the cerebellum. For the same reason concussions and other affections of this part of the brain arising from blows or wounds, frequently produce impotence.

Constant and profound meditation, an austere life, and solitude, sometimes diminish to

such an extent the action of the brain relative to the instinct of reproduction, that all desire has ceased, and the individual becomes incompetent to the act.

I remember, when attending the lectures of Dr. Gall, his saying, that such priests of the Catholic Church, as were considered in the odour of sanctity and chastity, were also remarkable for the atrophy or withering away of the genital organs.

A great number of affections of the mind produce impotency, the physical wants of the body being overpowered by these affections and impressions. Thus the pride and self-gratulations of conquest, the transports excited by the possession of the object of our most ardent desires, will suddenly take away the power of satisfying them. On the other hand, a timid and respectful love, admiration bordering on devotion, or the fear of performing badly the conjugal rite, may have the same effect.

John Hunter relates a case where he prevailed on a person in this situation to pass six nights with his wife without attempting to have any connexion with her, whatever might be his power or inclination. He afterwards assured Mr. Hunter that his resolution had produced such a total alteration in the state of his mind, that the power of connexion soon recurred; for, instead of going to bed with the fear of inability, he went with fear that he should be possessed of so much desire, and so much power, as to become uneasy to him, which really happened; and having once broken the spell, his mind and powers went on together, and they never relapsed into their former state of imbecility.

Disgust is also a frequent cause of temporary impotence. "Morositas, contemptus, ira, tristitia, corporis immunditiis ac fœtor, Venerem primario supprimunt." The imagination is sometimes the cause of temporary impotence with regard to particular females; as in the famous case of the Earl of Essex and Lady Frances Howard, in 1613, in which the marriage was declared void, because the Earl, on his own confession, was impotent with regard to his lady, although he had no defect or impediment, and was able to copulate with other women. This, in law language, is called *impotentiam* or *malificium erga hanc.*

The following is an account of this case. The Countess having transferred her affections to Viscount Rochester (afterwards Earl of Somerset), and being desirous of a divorce, accused her husband of impotence; asserting that, during three years, the period of their marriage, the Earl had never been able to succeed in having connexion with her, and that she was still a virgin. Upon this, a jury of peeresses and matrons were assembled to examine her. It is said that she substituted in her place a young woman of her own age and size. The jury pronounced her a virgin, and that she was well organised and adapted for children. The Earl, on his answers, admitted his inability to know her, but denied his impotence as to others, and expressed his belief that she was incompetent for copulation. Many witnesses were examined, and objections raised on the propriety of dissolving the marriage on such grounds. It was finally decided by a small majority that the marriage should be dissolved, which accordingly took place. On the proceedings of this trial, there is reference to the case of one Bury, tried in 1561. His wife cited him before the Ecclesiastical Court, on the ground of impotence, and the physicians deposed that he had but one testicle, and that no larger than a bean. The want of access was also proved, and a sentence of divorce accordingly passed. After some time, Bury married again, and had a son by his second wife. A question arose, after the lapse of some years, whether the offspring was legitimate, and it was decided that *the second marriage was utterly void,* because the Ecclesiastical Court had been deceived in the opinion they had given on the impotency of Bury.

The most remarkable case, perhaps, on record, is the one I alluded to when speaking of trial by congress.

On the 2nd of April, 1653, the Chevalier René de Cordonan, Marquis of Langey, aged 25 years, married Mademoiselle Marie de St. Simon de Courtomer, between 13 and 14 years of age. The commencement of this marriage was happy. When the husband was absent, his wife used to express in her letters the lively impatience she experienced for his return, and always addressed him with that tenderness of affection which constitutes the happiness of wedded life.

This good understanding continued during four entire years, that is, until the year 1657, when Madame Langey accused her husband of impotence. She carried her complaint before the legal authorities, who ordered fit and skilful persons to visit the parties. These delegates, having made their visit, declared in their report, that they found each of them in that fit state in which they ought to be as man and wife. Madame de Langey, in order to invalidate this report, pretended that, if she was not a virgin, it was on account of the brutal violence of her husband, who had recourse to every means, in his impotent endeavours to gratify those passions, which were as furious as they were fruitless. The Marquis, piqued at this reproach, demanded the trial by congress. The judge ordered it; Madame de Langey appeals against the decision, but it was confirmed by a decree.

To carry it into effect, a place is made choice of, and a jury, composed of five physicians, five surgeons, and five matrons, are assembled. It is unnecessary to relate the disgraceful and obscene details with which this jury filled their reports after the termination of the congress; suffice it to say, that the result was not in favour of the Marquis, and the marriage was declared void

by a decree of the 8th Feb., 1659, which condemned him to the costs of suit, ordered the lady's fortune to be restored, and strictly forbade him to contract another marriage, whilst it allowed Madame Langey, now Madlle. de St. Simon, to act as she might think proper, being at full and perfect liberty to enter into any fresh ties.

The day after this decree the Marquis entered his protest before two notaries, declared that he did not acknowledge himself impotent, and that, notwithstanding the prohibition to marry again, he would enter into the marriage state as before, whenever he judged *àpropos.*

Madlle. de St. Simon contracts marriage with Monsieur Pierre de Caumont, Marquis of Boisle, the issue of which marriage were three daughters.

At the same time the Marquis of Langey marries Madlle. Diana de Montault de Navaille, and this marriage is followed by the birth of seven children.

The Marchioness of Boisle died in 1670, leaving a clause in her will in which she nominates a friend to terminate, by amicable arrangement, the suit which was still pending between her and the Marquis of Langey; in 1673 this friend dies without any thing being settled.

During the litigation which took place on the death of the Marchioness, between the Marquis of Langey and the Marquis of Boisle, to decide the fate of the children of the former (a delicate affair which greatly embarrassed the judges) it appeared, that the orders, left by the Marchioness when dying, clearly brought to light the stratagem she had recourse to, when she managed to obtain a decree, in 1659, by which her marriage was annulled.

The Minister of Public Justice availed himself of this opportunity to obtain the abolition of the useless and infamous proof of virility by trial of congress. Consequently on the 18th of February, 1767, it was decreed that the proof of congress should be for ever abolished.

I have detailed this trial, because you will not meet with it in any modern work, and it is the last which took place. This mode of ascertaining the impotence or virility of a man was of great antiquity. It was in vogue before the time of Justinian (towards the fifth century) who abolished it, as opposed to the purity of the Christian religion.

Justinian decreed that a husband might be repudiated without the wife losing her dower, if during two years he has not been able to consummate the marriage, afterwards he extended the period of probation to three years. Montesquieu observes, that in such a case two years were as good as three, and three no better than two.

There are many causes of impotence which may be considered as doubtful or uncertain, such as bifurcation of the penis, strictures of the urethra, phymosis and paraphymosis, sarcocele, hydrocele, scrotal herniæ, and certain fungus hæmatodes of the scrotum, also hypospadias (ὑπὸ, sub, and σπάω, traho) where the penis is drawn downwards, and epispadias where the penis is drawn backwards, in which cases, the gland being imperforate, the urethra opens more or less near the pubis, either in a superior or inferior part. To these may be added severe injuries of the sexual organs, carcinoma of the testicles or penis, all affections of the head and spinal marrow, whether from a fall, blow, wound, or poison, many affections of the mind, a cachectic state of the body, and a great variety of diseases.

The following may be considered as the causes of impotence in the female.

The absence of the vagina is necessarily accompanied with impotence; also the obliteration of the genital organs, whether adventitious or congenital, caused either by the union of the labia or of the carunculæ myrtiformes; but the thickness and resistance of the hymen, or the presence of another membrane situated much higher, and which may co-exist with it, cannot be considered causes of impotence, since they may be easily remedied by incision. Also the vagina opening into the anterior parietes of the abdomen, or communicating with the rectum, ought not to be considered a cause of impotence. Barbaut relates two cases where the vagina communicated with the rectum; in the one delivery took place in consequence of the parts being torn and rent asunder as far as the meatus urinarius, and in the other by means of an incision, which allowed of the escape of the fœtus. Professor Rossi relates a similar case of a young Piedmontese, where there existed a direct communication between the vagina and the rectum, which was congenital; by means of an incision delivery took place. Morgagni makes mention of one Gianella who was called in to deliver a woman about 40 years of age, where the vagina opened into the anterior parietes of the abdomen, and who was obliged to dilate the exterior opening so as to allow of the passage of the infant.

The extreme contraction of the vagina may be either curable or incurable. It may proceed from a considerable depression of the os pubis, from hypersarcosis, soft fungous excrescences, from callosities, tumours, and other causes, which sometimes resist all the means of art. Van Swieten mentions the case of a woman, who had been married above three years. The marriage was about to be annulled on account of impotence, the vagina not being larger than sufficient to admit a common goose-quill, notwithstanding the efforts of a vigorous husband. The sides of this canal were hard, and as if callous; by the use of emollient fomentations and pessaries of different sizes, made of gentian root, it became sufficiently dilated to allow of coitus taking place.

In the "Memoires de l'Academie des Sciences," we read an account of a young woman, who was married at sixteen, where the vagina was so narrow as scarcely to admit of the introduction of a common writing-pen;

the menstrual discharge flowed with difficulty and with pain. There was every reason to believe that the superior extremity of the vagina was even more narrow than the inferior; coitus was declared utterly impracticable by the medical men; notwithstanding this, after the expiration of eleven years from the marriage, the woman became pregnant, although the contraction of the canal was not in the least diminished; about the fifth month of pregnancy, the vagina began to dilate itself, and finished by acquiring those dimensions necessary to the accomplishment of delivery.

Prolapsus of the vagina or of the uterus do not necessarily cause impotency; they generally admit of being remedied, and are sometimes cured by pregnancy.

Sterility is that condition of the organs of generation, which does not allow of conception; whilst *impotence*, as has been already mentioned, is that condition of the parts which does not allow of coitus. A man who is impotent is necessarily sterile; but a woman may be impotent without being sterile, because, when the impediment to coitus is removed conception may take place.

The causes of sterility in a woman are the following: the absence of the uterus, the deficiency of a cavity in the interior, the occlusion or agglutination of the orifice, the absence of both the ovaries, scirrhus, carcinoma, or dropsy of the ovaries, the absence of the spermatic arteries, the obliteration of the Fallopian tubes, malformations, as where the vagina terminates in a cul de sac, or opens into the bladder. But the vagina opening into the rectum or into the anterior parietes of the abdomen, is not a cause of sterility, as has been already noticed.

Another cause of sterility arises from a peculiar disposition or state of the body, where, notwithstanding the organs of generation are to all appearance in a healthy condition, yet the woman does not conceive; but at the expiration of an indefinite period the sterility ceases, either from the disease, which may have occasioned it, being cured, or from some change having taken place in the temperament or peculiar state of the body. Thus we frequently see women bear children after having been barren for fifteen or twenty years.

Fluor albus, menorrhagia, or even cancer of the uterus, though they may render a woman less susceptible of conception, yet they do not prevent impregnation from taking place; neither, as I have previously observed, does the non-appearance of the menses, or the absence of voluptuous sensations offer an impediment to conception, for many women have become pregnant who have never menstruated; others again, whilst in a state of insensibility, either from intoxication, stupefaction of narcotic drugs, or even asphyxia. Other women have proved very prolific, who never experienced the smallest spark of pleasure or enjoyment whilst in coition; but, on the contrary, received the embraces of their husbands, either with a painful sensation, with cold indifference, or even with disgust.

If, when there is no malformation of the parts, it is difficult to account for the sterility of a woman, it is under similar circumstances still more so to account for that of a man; suffice it to say, that a man becomes sterile, or, if you prefer the term, he becomes impotent when the spermatic animalculæ cease to be formed.

We thus perceive that impotence and sterility may be either permanent or temporary; and from the cases cited we may infer, not only how difficult it frequently is to ascertain its existence, but how much the difficulty is increased to distinguish between that which is permanent and that which is only temporary; and therefore, when it is unaccompanied with any organic lesion of the parts, which renders it no longer a matter of doubt, with what extreme caution we ought to deliver an opinion which may involve interests of the highest nature.

Reviews.

An Essay on Clinical Instruction. By E. C. A. Louis, M. D., Physician to the Hospital of La Pitié, Perpetual President of the Medical Society of Observation, Member of the Royal Academy of Medicine, and of the Legion of Honour. Translated by Peter Martin, M.R.C.S. Pp. 33. Highley.

Until within the last few years clinical instruction in the hospitals and dispensaries in Britain had not been given. Instruction on this very practical department in our profession, namely, in the practice of medicine and surgery, has been given in extemporaneous effusions of crude and undigested theories on the nature of disease; wild hypotheses,—the creations of the poetic Armstrong, the hobby of Abernethy, the one-sided views of Clutterbuck, with a large array of a host of pigmies in science and in medicine, who have acquired for us the applause of our countrymen, but the ridicule of foreigners. Assertion has been misnamed the result of experience, and declamation argument. But the days of poesy and romance are dwindling away, reality is becoming the object of the sensible portion of the profession; theories based on the data of rigid observation only are received. We have arrived at an age when medicine must be studied, its laws investigated, and its practice scrutinised on the Baconian system. Induc-

tive philosophy must guide us, and industry obtain for us posthumous renown. We make these remarks as prefatory to the present analysis of an Essay by M. Louis; an essay of which every one, acquainted with the character of its author, will hail the appearance in his vernacular language with much delight.

Perhaps there never was an author who commanded more, in his lectures, the attention of his auditors, or interested more, in his writings, the majority of his readers. For elegance of diction, perspicuity of delivery, methodical arrangement of his subject, and profundity of observation, those who have heard or read the works of Louis can amply testify; but to leave the panegyric of an individual, whose name is familiar to every scientific practitioner, let us proceed to a review of his Essay. After paying a just and well-merited eulogium on his predecessors and cotemporaries in the branch of clinical instruction, and pointing out the advantages which must necessarily accrue from its study, we are brought to the very threshhold of practical inquiry,—into the elucidation of disease. We are told, that a knowledge of the cause of disease, of the preliminary steps to arriving at a conclusion of its character, such as age, sex, temperament, general habits, climate, physical and moral constitution, prior diseases, occupation of the individual, and conformation of his various organs, are of paramount importance in enabling us to arrive at correct conclusions in *diagnosis*, and no less so in *prognosis*, for symptoms which might indicate mortal consequences in one person, may be of comparatively little importance in another differently circumstanced. Our categorical examination is to be conducted with method and physiological order: in interrogating a patient, question is to precede question in such a manner that it shall be obvious to an intelligent patient, his medical man is not endeavouring to collate an abundance of symptoms merely with the object of producing effect, but that he has a system in his examination; every question shall tell, every answer shall imply a phenomenon as a sequence of the preceding. It is only by such a procedure, by such a systematic course of examining every patient, by an invariable adherence to this plan, that disease can be studied as a scientific topic. M. Louis shall speak for himself on the importance of not allowing ourselves to be deceived by *ex parte* statements of patients, after having satisfied ourselves respecting certain preliminary inquiries, the symptoms next claim our attention. "These must be studied successively, one by one, in the order of their development, from their appearance to the moment at which the patient is submitted to our observation, and from this moment to the termination of the malady; the precise epoch of the appearance of each must be inquired into, without which we might, following the example of more than one author, be induced to consider as primitive, symptoms which are only secondary, and consequently to deceive ourselves with regard to the true character of the affection."

With these instructions it is scarcely necessary to say, our own sentiments are in accordance. The history of each case from its earliest period, and a careful tracing of the symptoms from the first deviation from health, are of the highest value. The phenomena first displayed are to be referred to one or the other systems of the body, however hypothetical the principle may be, watching carefully the development of each symptom.

Any deviation in the function of an organ from its normal state is an infallible criterion of disorder in its mechanism; one must inevitably precede the other; this is an incontrovertible position. It becomes, then, a question whether this disturbance be primary or secondary, a problem to be solved only by careful scrutiny. "For a good observation," says the author, "the complete examination of a patient supposes" "an exact knowledge of the state of all his functions, and of all the viscera, from the commencement of the disease to its termination in recovery or death; and, consequently, the regular employment of all the methods of exploration, as well general as local." The ordinary methods adopted are discussed with the author's usual perspicuity and judgment. Some very useful observations are made respecting the kind of questions and the manner in which they are to be put to patients, "in order that we may not dictate the replies," for they may attribute their diseases to causes foreign to those which induced them. Many patients will attribute sciatica to cold, a humid atmosphere, sleeping in a damp bed, &c., when, probably, no such cause has existed;

hence the imperative necessity of cautious induction.

"After the prognosis, comes naturally the choice of the remedial measures, the determination of the treatment. Here the physician ceases to be a simple observer, and proceeds to act. But how, and by what rules?" The question is asked, "Is he to act merely according to the results of experience, or according to some theory, or, as it is expressed, a rational indication?" These questions are answered in a negative manner. Empiricism is the general practice in medicine. Diseases apparently alike require opposite modes of treatment. "*Rational* medicine then is the medicine of experiment." How imperfect must be the healing art! How little do we know of the principles which should guide us in practice, when we are told by one of the first European physicians that our prescriptions are but experiments. The confession may be honest, but it is an humiliating one. We cannot, however, subscribe to its verity. The medicinal agency of drugs cannot be calculated with unerring certainty, but there is an extent to which they may be relied upon; we know, for example, that jalap will act as a purgative, mercury as a sialogogue, antimony as an emetic, arsenic as a poison. These are but a few of the facts in medicine, a few of the fundamental principles; their *modus operandi* varying but with the quantities prescribed. These constitute *some* of the *certainties* in the practice of medicine. In the advocacy of clinical instruction, the author observes, in reference to the labours of the teacher, alleged by some as too onerous, —"There would be, year after year, a new and long task, in addition to the ordinary labours of the profession. But is this a reason for rejecting it, especially on the part of those who would have over their masters the advantage of some years younger?" Assuredly not: English medical students are but beginning to appreciate the value of clinical lectures, they perceive the utility arising from such instruction, they see in the hospitals, more especially in this great metropolis, disease in all its forms, and in all its grades, from the simple inflammation of the skin to the malignancy of a sphacelated member. They watch the progress of those diseases, but too often, alas! without a monitor to direct their observations, without a preceptor to teach the character of the morbid changes; the sense of vision and the feeling of astonishment are alone feasted, information they acquire not; they might as well walk the hospitals hood-winked. It is true that a few men in this metropolis have delivered clinical lectures on important cases in hospitals, but few have they been. This palpable negligence is not attributable to the medical officers of those institutions individually or collectively, but to the absurd, the inherent badness of the laws by which those very institutions are regulated. They are nests of discord, theatres of war and for collisions of interest, in which many of the base passions are displayed.

The medical men in France live in the bosom of their profession; the medical men in England live to make money. The one are philanthropists, the other accumulators of wealth. Bichat went to the grave with his brow decked with laurels, and his countrymen weave garlands around his tomb; Englishmen die, and their memory is transmitted to posterity in mercantile records. The French excel us in anatomy, in physiology, in chemistry, and in the treatment of chronic disease. They are patient observers of nature; they investigate her laws; in industry and patience they abound, however trite may be their character of flippancy. The present essay every one should possess; no one who could appreciate the amount of interest or of information we have derived from its perusal would be without it. Heartily do we thank Mr. Martin for bringing it before the British public; he has performed his duty well. This, though expressed in a few words, is saying much.

Dublin Journal of Medical and Chemical Science. November, 1834.

On the Diagnosis of Fractures of the Neck of the Femur. By R. W. Smith, A. M. Curator to the Museum of the Richmond Hospital, Dublin, &c. &c.

No subject of surgical pathology or diagnosis has obtained more of the attention of practitioners, and of experienced ones, too, than that of Fracture of the Cervix Femoris. Yet every one will admit, that every now and then a poor patient's limb is tugged at, in the pulleys, to the discomfiture of the surgeon and

agony of the sufferer, when it ought to be placed in the most quiescent position, or, in plainer language, that a mistake in diagnosis occasionally happens, reflecting upon the individual surgeon, and upon the surgery of our day. Every attempt, therefore, to confirm opinions already stated, relative to this accident, or to point out new diagnostic marks, must be favourably received, and the more especially when such an attempt is founded upon the "*observation* of a great number of cases, and the performance of numerous dissections of this fracture."

The first diagnostic mark which Mr. Smith notices, is the shortening of the limb by the extent of which some surgeons consider they can distinguish between fracture external to the capsule, and that internal to that ligament. He proceeds to state the opinions of Cooper, Stanley, Earle, and Boyer, "as to which of these accidents is attended by the greater amount of shortening." The opinion of Cooper, "dont l'autorité est si imposante en chirurgie," is, that in the intra-capsular fracture the injured limb is shortened from one to two inches and a half, which, in the extra-capsular fracture, is shortened from one-half to three quarters of an inch. With this opinion our author completely dissents, not conceiving it "possible that the capsule of the hip-joint would admit of displacement to two inches and a half without being extensively torn, an occurrence very rare indeed; and if, as is frequently the case, the fibrous reduplications, which constitute (?) the periosteum of the neck of the bone, remain entire, or nearly so, retraction may be almost completely prevented." In this opinion he has the support of Stanley, Earle, and Boyer. He therefore comes to an opposite conclusion to that of Sir A. Cooper, and considers that the shortening is greater in extra-capsular than in intra-capsular fracture, excepting in one case, viz., that in which (the fracture being extra-capsular) "the upper fragment is driven a short distance into the cancellated texture of the lower, the ascent of which it not only prevents, but sometimes renders the restoration of the limb to its original length, by extension, a matter of extreme difficulty."

Mr. Smith gives a table of observations made on thirteen cases of fractured cervix, four of which were extra-capsular, and the limbs were severally shortened, one inch and a half, two inches, one inch and a half, and three quarters of an inch. The remainder were intra-capsular, of which only one was shortened to the extent of an inch and a half, a second to one inch; and of the remaining seven, two were shortened three-fourths of an inch, four to half an inch, and one one-fourth of an inch. In the instance of intra-capsular fracture where the shortening was to so great an extent as an inch and a half, the accident was of long standing, and the neck of the femur was absorbed. This table deserves much attention, because the diagnosis was verified by actual post mortem inspection, and the causes of the variation in shortening thereby likewise determined.

Our author next proceeds to ascertain what degree of aid is afforded by the positions of the foot; and here he very judiciously observes, "that there is no injury as to the nature of which we shall be more frequently deceived, if we form our diagnosis from the presence or absence of any one particular symptom, than fracture of the neck of the femur; nor is it unimportant to ascertain whether there has been any previous affection of the hip-joint. We have seen that the alterations which the limb usually suffers with respect to length, cannot aid us in forming our opinion in every case, as it does not always occur immediately after the accident; so is it with respect to eversion of the foot; we cannot pronounce that the bone is broken because this symptom is present, neither from its absence can we infer the non-existence of fracture, for it is now well known that the foot may be turned either inwards or outwards, or remain unaffected by the injury."

Eversion of the foot may exist without fracture, as when the neck of the bone has been diminished in length by the presence of "morbus coxæ senilis;" and, on the other hand, inversion may co-exist with fracture without the capsule, when, as Mr. Guthrie was the first to notice, the fracture is situated external to the insertion of the rotators outwards, yet sufficiently within that of the glutæus medius and minimus as not to deprive them of their due action. Mr. Guthrie was of opinion that inversion could not co-exist with intra-capsular fracture; yet Mr. Stanley has recorded a case in which this phenomenon was observed; and

our author has likewise seen one Both these observers, the one long known as a teacher of anatomy in London, the other no superficial observer, as this paper abundantly proves, profess themselves unable to account for the occurrence of this phenomenon, in connexion with intra-capsular fracture. We cannot help thinking that a minute analysis of the nature and direction of the force which caused the fracture, might explain this occurrence, by showing that a displacement of the lower fragment might take place immediately on the occurrence of the fracture, the reduction of which might be prevented by the two portions being entangled together towards the posterior and outer part of the upper one, and thus a more favourable position might be afforded for the actions of the rotators inwards; but this we merely throw out as a hint, the accuracy or inaccuracy of which will best be discovered by such surgeons as Mr. Smith and Mr. Stanley.

The subject of partial fracture of the neck of the femur, is next adverted to. On this subject our author favours us with some very valuable remarks from the pen of Mr. Adams, the substance of some observations which fell from him in the discussion which followed the reading of this paper before *the Surgical Society of Ireland.* We shall present our readers with an abstract of these remarks.

It not unfrequently happens that the surgeon is called to a case of injury of the hip, from a fall on one of the trochanters, presenting *some* of the characters of fracture of the neck of the femur, but wanting the more striking features of the accident. The patient does not attempt to stand or walk, from a species of consciousness that he can do neither; he cannot, by one effort, raise the limb from the floor or bed; he can, however, flex the leg on the thigh, and the thigh on the abdomen, and this is the position in which the surgeon usually finds the limb on his first visit, "supporting the weight of the bedclothes, a circumstance that would strongly confirm the surgeon's prejudice that in such a case no fracture existed." There is no eversion even in the extended position, no perceptible diminution in the length of the limb, no crepitus, and rotation in either direction is effected without the usual pain. The trochanter major seems to project more than is usual, which is very obvious if the hip be examined while the patient is supported in the erect posture. If, after the lapse of a month or six weeks from the accident, a new examination be made, the limb will be found shortened, and the toe everted. It is obvious that the true nature of an accident attended with such phenomena, can only be fully developed by the post-mortem examination of a number of similar cases; but, as death rarely occurs, this opportunity seldom happens. Mr. Adams is convinced he knows some living instances of this accident, and he possesses some femora, that are undoubted examples of the partial fracture.

Before explaining the pathological changes which characterise the injury, Mr. Adams gives some very ingenious remarks on the natural structure of the neck of the femur. On viewing a vertical section of the neck of the femur, made in the direction of its long axis, and carried down the shaft, it appears that the principal strength of the neck resides in an arch of compact tissue, which begins, then, where the globular head joins the inferior part of the neck, and which gradually enlarges towards the trochanter minor, and even as low as the middle of the femur, where it will be found nearly twice the breadth of the opposite wall of the shaft of the bone. This compact stratum seems "artfully arranged," so as to give support to the body in the erect position, and hence we find it thrown into an arch upon which the weight of the body falls, as that of a carriage does on the C spring which sustains it.

In falling or leaping from a height on the feet or knees, the weight is first received upon the thin upper stratum of compact tissue, and upon the reticular tissue of the neck, by which some of the force of the shock is decomposed, but the long arch of compact tissue chiefly sustains the violence of any impulse transmitted from above; hence a fracture rarely occurs when the fall is on the feet or knees, because then the force is thrown in the most favourable manner on the long arch of compact tissue; but if the fall be on the trochanter, which is resisted by the ground, then "the weight of the pelvis, &c., acting obliquely on the under surface of the neck, will have a tendency to bring the neck of the femur into a straight line with the shaft of the bone, or in other words to efface its obliquity; here the

compact tissue so often alluded to receives the force from below in a most unfavourable manner, and this tissue cracks across, and if no more happens for the present, we shall have the simplest form of partial fracture of the neck of the femur.

Why the unbroken part of the femur undergoes such a change as to give rise to those symptoms which, after a lapse of six weeks, are unequivocally present, is thus explained. The cervix femoris is shortened, because the compact tissue having lost its continuity, can no longer resist the action of those forces which have a constant tendency to shorten the neck, and eversion takes place, probably, in consequence of a subsequent interstitial absorption which sets up in the neck of the bone, from the shock it received at the time of the accident, and thus it will readily yield to the action of the muscles.

In these cases, the neck of the femur has lost its threefold obliquity, and the head and neck of the bone are directed at right angles with the shaft. The posterior inter-trochanteric line has been the seat of osseous deposition in all the cases Mr. Adams examined, and the interval between that line and the head in the posterior surface of the neck, was diminished one-third.

This species of fracture was first noticed by Dr. Colles, and has since been briefly adverted to by Amesbury and others.

Mr. Smith concludes his paper by alluding to a disease known, but by no means generally, under the name of *Morbus Coxæ Senilis*, and described by Mr. Benjamin Bell under that of "*Interstitial Absorption of the Neck of the Thigh Bone.*" The disease is seldom seen under the age of fifty; is chiefly met with among the labouring poor. It commences with pain and stiffness of the joint, which does not increase with exercise, but, on the contrary diminishes. Heat, damp, and foggy seasons, aggravate the pain. There is shortening of the limb by slow degrees; the patient walks lame, but can apply the sole of the foot to the ground; there is eversion of the foot; the nates of the affected side loses its prominence, but that of the opposite side increases in prominence; the spine acquires a lateral curve; the disease does not endanger life. A similar affection is occasionally met with in the shoulder-joint.

The anatomical alterations connected with this disease are, thickening of the capsular ligament, absorption or ossification of the cotyloid ligament, total destruction of the ligamentum teres, and of the fatty substance at the bottom of the acetabulum. The cartilage of the acetabulum is absorbed, and replaced by an enamel or ivory deposit; the cavity is altered variously in size and form; the cartilage on the head of the femur is absorbed, and the surface of the bone is sometimes dotted with a number of minute holes, varying from the fifth of a line to a line in diameter, and sometimes covered with ivory or enamel. The head is changed in form, losing its spherical character, and generally conforming to the alteration in that of the acetabulum. The neck of the bone is more or less absorbed, and placed at right angles with the shaft.

Our author draws the following conclusions from the facts he has stated:

"1. The less the degree of shortening, the greater is the probability that the fracture is within the capsular ligament.

"2. The degree of shortening, when the fracture is intra-capsular, varies from a quarter of an inch to an inch; when extra-capsular, from one inch and a half to two inches and a half.

"3. The limb may remain without any change in length for many weeks after the receipt of the injury, then retraction may suddenly occur.

"4. This sudden retraction, at a period more or less remote from the receipt of the injury, indicates a fracture within the capsule.

"5. The presence of *morbus coxæ senilis* may not only lead us to suppose that a fracture exists when the bone is entire, but also when there is no doubt as to the existence of fracture may render diagnosis difficult, as to the seat of the injury, with respect to the capsule.

"6. Inversion of the foot may accompany fracture within the capsular ligament.

"7. The accidents most liable to be confounded with dislocations upon the dorsum ilii, is fracture through the trochanter, together with inversion of the foot.

"8. The degree of shortening, when the fracture is within the capsule, chiefly depends upon the extent to which the fibrous reduplications have been torn.

"9. When the hip-joint, long affected by that disease peculiar to old people, receives a severe contusion, we distinguish the accident from fracture of the neck of the bone by the impossibility of restoring the limb to its natural length by extension, and also by an inquiry into previous history."

To pass any eulogium upon the preceding paper would be in some degree to question the discrimination of our readers. We have analysed it at greater length than we usually devote to similar articles, because it contains information on a subject interesting to all scientific surgeons, which is valuable, because it is free from speculative views, and based on anatomical facts and bed-side observations. A curator of the museum of a large surgical hospital holds an enviable situation. The preceding paper denotes that its author need not fear to approach any subject of surgical pathology; and we hope that his present attempt, so interesting and so successful, is only an earnest of further labours in that rich, though much neglected, field.

A Manual for Students who are preparing for Examination at Apothecaries' Hall. By John Steggall, M.D., &c.

Although we cannot conscientiously recommend works of this description, as they are nothing more than an encouragement to idleness, and impress many with an idea that the subjects before them, though numerous, may be easily attained, yet we cannot do less, as such books will find an existence, than to speak of them as we find them. This sixth edition is certainly a great improvement, containing many valuable and useful chemical notes, and leaving out much of the superfluous matter which existed in all the former editions. As far as it relates to chemistry and materia medica its condensed notes are valuable to the student, but we must strongly recommend him not to pass this limit, for Dr. Steggall himself, particularly in the anatomical department, appears to have fallen from his element. The whole of it relating to descriptive anatomy will only puzzle the student if he attempts to read it, and give him an unconnected chain of ideas, which will inevitably prevent him from being linked to the learned society at Apothecaries' Hall; and as for the practice on medicine, which follows, if he confines himself to it, we should feel for him the evening he presented himself for examination. We believe the first part of the edition before us, however, will greatly facilitate the memory of the student, and on that ground recommend him to have the work in his possession; and should the author find it necessary to bring out another edition, instead of filling the pages with such imperfect anatomy, we should recommend him to extend his description of the different metals which we find are scarcefy noticed in the present edition.

Description of the Encircling Ligature Apparatus of Dr. Von Graefe, of Berlin, with an Account of the various Modes of Application, and a Summary of the Comparative Merits of the Apparatus. Translated from the German by F. F. Weiss. Stitched, pp. 23. 1834.

The ingenuity of surgeons has long been exerted in devising instruments by which the various operations on the human body might be more easily effected, and human suffering diminished. At various periods instruments of different descriptions for every operation have been brought forward, all purporting to be superior to their predecessors. In no department of operative surgery is more required an improvement, than in the means of including arteries in ligatures, particularly those which are deeply seated, as the iliacs, the aorta, and the subclavians, but more especially when they are further concealed by disease, as, for example, in a case of aneurism of the axillary artery, where the clavicle is elevated upwards and forwards, so that the subclavian, which may have to be tied, is almost beyond the reach of the finger; here the surgeon is often greatly embarrassed, he has discovered the artery, has insulated it from the surrounding parts, but cannot convey the ligature around it without great trouble, and causing much pain to the patient; his chief difficulty, however, being to tighten the ligature, great depth and want of space both increasing this difficulty. If, in such an operation, an instrument can be devised, by which these obstructions may be removed, the inventor will assuredly be a benefactor to the community, and deserve the approbation of his professional brethren. Graefe has, in our opinion, effected this most desired object. His instrument can

also be as efficiently used in polypoid or other tumours of the various mucous cavities, or of whatever character those tumours may be. The instrument is made of silver, "and consists of five pieces, viz. three ligature holders, a short, a middle-sized, and a long one, and two windlasses of different construction." It would be difficult to convey a clear description of these instruments without the aid of diagrams. We have had an opportunity of inspecting them at Messrs. Weiss, the makers, and feel assured that they are capable of fulfilling the various purposes for which they are intended. No hospital surgeon should be without them, or even any individual who may require to remove polypi from the nose, uterus, rectum, or be called upon to tie deep-seated arteries; they supersede all others we have ever witnessed.

Reports of Societies.

WESTMINSTER MEDICAL SOCIETY.

Saturday, November 8th, 1834.

G. T. Burnett, Esq., in the Chair.

In our last notice of this Society we alluded to the extraordinary conduct of the Ex-Committee in changing the by-laws, without consulting the members at large upon the subject. We then stated, that a protest was entered against the election of the officers under the laws, and that there was every reason to believe that an appeal would be made in conformity with the regulations. This was done on the 1st instant, and was to have become the subject of discussion on the last evening, but the appealers, anxious to save the time of the Society, waived their motion, with the idea that an amendment, proposed by Dr. Epps and seconded by Mr. Clapp, would be brought forward. It demanded the appointment of a Special Committee to revise ALL the laws of the Society, as they were considered to be in a defective state. The President recommended that the Committee, then in existence, should be requested to undertake the task, but this was objected to by the proposer, on the grounds that many of the members were of opinion, that the Committee was illegally elected. The President afterwards refused to entertain the amendment, as he considered it to be in direct opposition to the laws. Several others were proposed, but met with no better success. At last the question was put from the chair, whether the by-law for the election of officers, as amended by the Committee, should or should not be the law of the Society. The ayes were about twelve or fourteen, the noes upwards of forty. Consequently the Vice-Presidents were thrown overboard.

As a necessary consequence of the rejection of this alteration, the elections which took place under its operation are, *de jure*, null and void. There can be no vice-presidents to a society if the by-laws do not authorise the election of such officers. But we understand it to be the determination of the Tory party in the Society, that they shall remain for this season; and, for the sake of peace and to avoid losing more time, the Whigs have ceased their opposition.

We have seldom been present at a more turbulent meeting, or heard a more stormy discussion; and after all, until ten minutes before the meeting was adjourned, they were no further advanced than they were five minutes after they commenced.

LONDON MEDICAL SOCIETY.

Monday, November 10th, 1834.

W. Kingdon, Esq., in the Chair.

An extract from a letter, addressed by Mr. Bond, of Foy, in Cornwall, to Mr. Kingdon, was read, giving a short notice of a case which had recently occurred in his practice. A man was leaning on a loaded gun, the muzzle being in his axilla, when a boy touched the trigger, and the whole charge (small shot) entered the body, making its exit at the superior angle of the scapula. Considerable hæmorrhage ensued, and Mr. Bond was ultimately obliged to tie the subclavian artery. Emphysema ensued in a very short time, but, although air was evidently passing out of the wound at each expiration, it did not increase. From the existence of emphysema, it was suspected that the lung had been injured, but, on examination after death, this proved not to be the case. The man lived a fortnight after the accident.

Mr. Norris narrated a case of cut throat, in which there was not any difficulty in deglutition, although the pharynx was wounded;

the man was maniacal. This was made the subject of a rather animated discussion, as regards the influence of the mind upon the body. It was considered that if a man, perfectly sane, were to have his throat cut, and the pharynx injured, the mind being directed to that subject and brooding on it, would, at every attempt at deglutition, induce spasm, and become thus a source of difficulty, while the mere fact that the mind in the maniac is incapable of volition, and consequently of meditating on the affection, will prevent any such spasmodic action, and allow the muscles fair play. Of course this reasoning applies only to the involuntary muscles. Some cases were mentioned in illustration, as occurring in hysterical and maniacal patients. The President summed up the discussion, by giving it as the results of his experience, that "a strong minded individual has it always in his power to produce disease in any organ of a weaker minded or more susceptible person, by constantly directing his attention to that organ."

MEDICO-BOTANICAL SOCIETY.

Tuesday, November 11th, 1834.

G. J. Guthrie, Esq., F.R.S., in the Chair.

We had the pleasure of being present at the first meeting of this Society in Sackville-street, last Tuesday. The subject of the paper to be read was *endermic medication*, but, previous to its being brought forward, the President made some remarks on the progress of the Society, which, he considered, was evidently taking high ground, and was rapidly assuming high rank among the scientific bodies of the metropolis. He mentioned the great value and importance of the proceedings during the past session, and did not entertain but that the one now commencing would prove equally advantageous to the profession and the public at large.

Several presents of books, pamphlets, &c., were announced, as also of recent specimens of medical plants from Mr. Iliff and Mr. Thomas Gibbs. Among those presented by the former gentleman was the *oxalis crenata*, upon which he proceeded to make a few observations. It had been introduced into this country, and rather extensively cultivated, on account of its tube, which, when cooked, formed an excellent vegetable for the table; in taste it bore some resemblance to the chestnut. From the great luxuriance of its foliage, it would, Mr. I. thought, supersede the *oxalis acetosella* in the preparation of acid drinks.

The essay was then read by Dr. Sigmond, the senior Secretary, from whose pen it proceeded. After some few precursory remarks, Dr. S. gave a general description of the physiology of the skin, and then drew the line of difference between *iatraleptic* and *endermic* medication, on both of which he dwelt for some time, including in each a brief notice of the therapeutic agents, which are used according to either plan. As we hope to be enabled to lay the whole essay before our readers, we do not enter more fully into the detail of the valuable points in this essay. It was listened to with great attention, and received with marked applause.

Mr. Guthrie made some remarks afterwards on the endermic application of strychnia. He had tried it in amaurosis, at the Royal Westminster Ophthalmic Hospital, and, although he had not carried it far enough to do good, it had been used so as to produce very serious effects; and in one case, in which it had been employed in private practice, it had killed the patient. Those remedies, which are considered at all available, were previously employed, but unsuccessfully; at last, as a *dernier ressort*, it was determined to try the strychnia. This was used endermically at first, in doses of one-sixteenth of a grain, gradually raised to three, having occasional intervals of a week, whenever the symptoms indicated that the alkali was acting too powerfully. Purgatives were administered from time to time, as the strychnia is apt to collect in the system. At the end of three months, Mr. G. recommended him to abandon its use, which he did for short a time. As he was extremely anxious to get cured, and thought he had received some benefit from this therapeutic agent, he determined to resume it, and called on Mr. G. to tell him so. Under his own directions, he accordingly recommenced with some of the alkali, procured at Garden's, and at the same dose at which he left off, viz. three grains. Within four or five hours after he had applied it, he felt the most distressing symptoms about the throat, with violent spasmodic twitchings, which he at once knew arose from the action of the alkali, and he

accordingly removed the dressings. In the morning, he sent for a medical gentleman in his neighbourhood, who found him with these symptoms about the throat continuing, and not able to speak above a whisper, but the spasm had ceased. Mr. G. saw him in a day or two after, when he remained in the same condition. He continued to get worse, and died in three days. On examination after death, ulceration of the larynx was found to have taken place. This is a symptom not generally mentioned, when allusion is made to the injurious effects of strychnia. Now, reasoning homœopathically, Mr. G. would be inclined to think that small doses of strychnia might prove useful in cases of ulceration of the larynx, and, should he meet with a case, he would try it.

Dr. James Johnson, after complimenting the author of the essay on the value and importance of this paper, remarked that he had very little doubt but that the endermic method of medication would become much more extended in its application in this and other countries, because there are many circumstances which will preclude the internal administration of medicines, as, for instance, certain conditions of the alimentary canal; but still it will never supersede the employment of medical agents internally, more especially while medical men are to be paid for the quantity of medicines sent in, and not for the skill they display. He would not be much inclined to trust to small doses of strychnine in ulceration of the larynx, for he had seen very bad effects result from the homœopathic plan of treatment, but never yet saw a case where it did good; in nineteen cases out of twenty it did harm, by causing that time to be lost during which alone useful remedies could be employed.

Mr. Guthrie was sure that Dr. Johnson would believe, that he meant that proper doses should be given. In regard to payment for the visit of medical men, he should be most happy to see that brought about, and in the proper place had done his best to effect it, and that they should be paid not merely according to the skill exerted, but according to the capability of the patient.

Dr. Sigmond was then heard in reply, and the meeting shortly after adjourned to the 25th of November.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

We congratulate the members of the Medical and Chirurgical Society on a most gracious mark of the favour of the Sovereign, who has been pleased to grant a Royal Charter to this highly useful and respectable Society, and constituting the members *Fellows* thereof. The authorised style, therefore, of this Medical Association is now the Royal Medical and Chirurgical Society of London, thus placing it upon a level with the most distinguished scientific institutions of the country.

THE

London Medical and Surgical Journal.

Saturday, November 15, 1834.

PARLIAMENTARY EVIDENCE.

Dr. Seymour, Fellow of the Royal College of Physicians, and Physician to St. George's Hospital, examined.—Obtained his degree of Licentiate in Medicine at Cambridge. Practised for a short time at Florence: the fee given by the natives to physicians is about four shillings and sixpence. When asked what opinion foreign physicians entertain of Oxford and Cambridge as schools of medicine, he answers, "I do not suppose they know any thing about it. I have heard that, at Ofen, they looked in the map to find the University of Cambridge." They must have been exceedingly ignorant of the history of this country, to say the least of it;—that they should have never heard of the Cambridge or Oxford University in consociation with the science of medicine we can readily imagine. There are many intelligent men even in our own country who are equally ignorant of the circumstance. Those who are acquainted with the limited medical tuition at these seats of learning, as they are emphatically termed, admit, that they are not worthy of being regarded

in the slightest degree as schools of medicine. This will be incontrovertibly established when we arrive at the evidence given by Dr. Kidd, Regius Professor of Physic in the University of Oxford. Dr. Seymour was asked if he took any part in the recent proceedings of the College of Physicians regarding medical reform: the following was the first very laconic and metaphysical reply:—"I do not know what is meant exactly by medical reform." We will enlighten him on the subject:—It is the removal of what the many regard as abuses, and which abuses are maintained for the interest of the few. This is a simple definition. Reform does not imply the subversion of cities or communities, or the downfall of nations. But when a free, an intellectual and independent people find themselves surrounded by the bulwarks of monopoly, with firm and resolute courage they demand their rights, demand an abrogation of those pestiferous laws by which they are governed.

Certain propositions were passed at the College on the subject of medical education and printed; but, according to the Doctor's opinion, they are "not wholesome." In answer to the question whether he thought any change necessary in the statutes of the College or its constitution—"Yes; I think much might be done. I think it would be very desirable that the gate should be set open wider for the admission of Licentiates, but that the regular road should still be kept through the English Universities." He proposes an election annually or biennially, that the Licentiates should propose six individuals, from which the College should elect three, in addition to the Oxford and Cambridge Graduates. Though many eminent men have been elected by the President, he yet thinks the power might with more propriety be vested in the College.

With respect to the examination of candidates for the College, he objects to the elaborate one instituted at Berlin: he thinks that it "is quite unnecessarily minute." Look at the examination of the College of Surgeons,—it occupies a quarter of an hour, or not more than half an hour, unless the student be a dull fellow; at the College of Physicians an hour is about the average period of the examination. Is it possible, we would ask, for any sensible man to form an estimate of that extent of knowledge which a man may possess by a *vivâ voce* examination in so short a period. We affirm that it is not. The examination on anatomy, as at present conducted, is no proof that a pupil has ever dissected; and any successful examination in chemistry is but a proof that the pupil has read. Roman Catholics are excluded from the English Universities, but received as Fellows or Licentiates of the College of Physicians. He believes that the present Parliamentary Inquiry will be of great service, and that any alteration by the College immediately preceding this inquiry, was ill judged; that it would have been better to have deferred such alterations until the Committee had terminated its sittings; the College would have been more capable of judging of the necessities and wants of the profession. "As the law now stands, the College has the law in its own hands, and nothing but an Act of Parliament can take it away." Thinks the College would have effected every improvement without the interference of Parliament, but infers that any suggestion, coming from that august body, will be received with good will, and considered with patience; but is of opinion, that, like other human institutions,

the College might be improved, yet it is efficient. Dr. Seymour entertains the same opinion that we do respecting the privilege of granting degrees being given to the London University or King's College, or to any other private body, that it would be the cause of monopoly, dangerous and injurious in its consequences. Why give such a power to these two *soi-disant* Universities and not to any other of the large medical schools? — schools that have been celebrated for their professors years before the London University, &c. were dreamed of. When questioned regarding examining apothecaries' and druggists' shops, he is asked, "If he had examined the shops of vendors of patent medicines?" he answers, "I do not think that the jurisdiction of the College extends to patent medicines, since the Government licensed quackery by stamps." This answer must have shown Mr. Warburton, that the Government, of which he is a distinguished member, whilst it was investigating the laws of the medical profession with such earnestness, was, at the same time, repleting its coffers with the fruits of manslaughter.

Dr. Waterfield, Fellow of the College of Physicians, was next examined:—the interrogatories and the replies were very similar to those put to the preceding witnesses. The Doctor is not aware "of any Physician, Fellow, Licentiate, or unlicensed person, who practises physic within the precincts of London, making a bargain with a druggist for being allowed a per-centage on prescriptions." Perhaps the Doctor would have some difficulty in adducing positive proofs, but he has had, we dare say, sufficient "imputation and strong circumstances" to leave no doubt of the fact upon his mind. He has heard, we presume, of the two Licentiates of the Royal College of Physicians, prescribing at a druggist's in Holborn, and of one now a Fellow, who prescribed at a druggist's in Pimlico. How was it to be proved that these Fellows received a per-centage? by negative proofs only; we do not believe they would give advice gratis under such circumstances. No language would be unwarrantably energetic against such a disgraceful system.

Dr. Warren, Fellow of the College of Physicians, examined.—Is of opinion, that the connexion of the two Universities with the College of Physicians has been instrumental in sustaining the respectability of the medical profession in this country. The same opinion is entertained by the majority of the Fellows. Similar questions were put and nearly similar replies were given.

Dr. Wilson, Graduate at Oxford, was one of Dr. Radcliffe's travelling Fellows, the emoluments of which are 300*l.* a-year, and 10*l.* for rent for rooms. "The conditions of the will are merely that this physician should pass five of the ten years (that being the term which the appointment is held) 'beyond the seas' for his 'maintenance and better education,' general and medical." With reference to changes in the College. "I think it desirable to get rid of the class of candidates and inceptor-candidates, as confined to physicians graduating at Oxford and Cambridge, exclusively." General education and medical attainments, wherever acquired, to render a candidate eligible for a licence to practise, and, after a probation of say four or five years, all to be equally balloted for, for the Fellowship. In January, 1833, Dr. W. proposed a resolution, "That it is expedient to re-consider the by-laws relating to the qualifications of candidates and of inceptor-candidates, with a view to their alter-

ation, or repeal." "The resolution was negatived." No public reasons were assigned for the rejection of it by the Fellows. In November following, he proposed another resolution, omitting the words "with a view to their alteration, or repeal," which was carried almost unanimously; a report of which was printed. Believes an alteration in the laws and statutes of the College absolutely necessary for conciliating the Licentiates, and constituting an efficient board of health for the entire kingdom, that the College of Physicians is constructed on too narrow a basis "for the circumstance of the times."

ST. GEORGE'S HOSPITAL.

THE election of an Assistant-Physican and Assistant-Surgeon in this institution has just terminated. Result of the Poll:—Assistant-Physician; Dr. Hope 158, Dr. Dunlap 89; Majority 69. Assistant-Surgeon; Mr. Cutler 178, Mr. Lane 98, Mr. Palmer 23; Majority 80.

The Medical Officers in our noble and useful institutions are eternally at war. Rivalry, jealousy, love of place, and a thousand other petty causes are ever at work to create disunion. Mr. Brodie proposes a second Assistant-Surgeon at St. George's, to make a situation for his assistant and friend, Mr. Cutler; up starts Mr. Walker, the existing Assistant, and declaims against the creation of such an office, denying its necessity. A division in the senate house is effected at once; Mr. Brodie summons his forces to the Board Room, carrying with him the majority of his colleagues; the proposition, after some recrimination of parties and accusation of motives, is carried. During the active canvass, an anonymous notice appears in the *Chronicle*, reflecting discredit on Mr. Brodie and his colleagues. Mr. Brodie replies in defence of his own conduct throughout the proceeding, a defence that does much credit to the soundness of his understanding. He also endeavours to show that, in a hospital containing three hundred beds, two assistant-surgeons may be competently employed. Until the year 1828 there was no permanent assistant-surgeon; one was then elected, and at the time was suggested the propriety of having two, the latter proposition, however, was not carried, but deferred until the new hospital should be completed. The completion of the building being effected the office was proposed.

Mr. Walker objected to the election of a colleague in his department, alleging as the reason, that there was not sufficient employment for himself. This we do not believe. We are of opinion, that a much greater number of medical officers in the hospitals and dispensaries would enhance their value, the patients would have their complaints better attended to; instead of one man seeing fifty or sixty patients in an hour, as is frequently the case, they should be divided at least amongst three or four. The slovenly manner of seeing out-patients is a disgrace to the profession, we wish the public, the governors, who subscribe their money to those institutions for the relief of the sick poor, could become acquainted with such proceedings, such disgraceful negligence; they would alter this system. The hospitals at present are made, by the medical men, stepping-stones only to their own aggrandisement, and not receptacles for the cure of the sick and the maimed; nor are they, on the contrary, made available to the very important purpose of instructing the junior branches of the profession. We think, and we have watched the proceedings at St. George's attentively, that Mr. Brodie has

acted with much judgment, and has reflected honour on himself. The motives of Mr. Walker's objection are obvious to every one;—monopoly is an inherent feeling not absent in the breasts of many individuals. Mr. Cutler, we believe, from report, is well calculated to do justice to the office he has attained; the other candidates we believe are equally competent. Private interest is the talisman for commanding such an office.

MRS. HOPKINS.

We beg to call the attention of our readers to the letter of our correspondent, Mr. G. F. Knox, respecting this unfortunate lady. We second his appeal, and most earnestly solicit the members of the profession to exert themselves in her behalf. She has a greater claim on their sympathy, a greater right for their support, than those which spring solely from old age and poverty.

Our readers will bear in mind that Mrs. Hopkins is the widow of one physician and the mother of another; deprived by the hand of death of both those stays to which she naturally looked for support, she asks not much from them; her friends do not ask for guineas, but they seek for their *votes and interest*, at the ensuing election at the National Benevolent Institution, to secure for her a pittance, whereby she may be enabled to pass the remainder of her life, not dependent on the bounty of her friends. Many of our readers are perhaps subscribers, or, if not, have friends who are; to such we say, exert yourselves; remember that as medical men you have unbounded influence on your patients, and in no instance could you exercise it more honourably than in the sacred cause of humanity. It requires not the sacrifice of money; all that is necessary is a word or two, to secure her election. The subscribers are to be met with all over the country, the institution is not partial in its operation, so that every medical man may have it in his power to add a vote to the list of those who are in her favour.

Every subscriber of 5*s*. has the privilege of voting, twenty-five persons are admitted yearly to the benefits of the institution, so that every subscriber of 5*s*. has twenty-five votes, the whole of which he may give to one, or split them as he pleases; by these means, a few five shillings will easily obtain a large number of votes. Subscriptions are received at the Institution to within a short period of the election, and, in order to further the chances of Mrs. Hopkins' success, Mr. Renshaw, the publisher of this Journal, has kindly consented to receive the subscriptions of those who are willing to subscribe.

To the Editors of the London Medical and Surgical Journal.

Gentlemen,—The card which I inclose will explain my object in addressing you. Your best exertions are most earnestly besought on behalf of an aged lady, who, having passed in affluence a life exceeding the ordinary span of existence, is now, at the age of 72, in extreme penury. Her alliance with the profession is twofold. Her husband and son were physicians of no mean celebrity in this metropolis, and I doubt not that respect for the dead will influence many of your readers to contribute their aid to the necessities of the living. I have therefore no scruple in appealing to you for assistance in this charitable work. Medical men have great influence with the subscribers to the National Benevolent Institution, and I may also add, that a subscriber of 5*s*. is entitled to one vote, and an additional vote for every such sum. The election is on the 27th Nov.

Your very obedient servant,

George F. Knox.

14, *George-street, Adelphi.*

National Benevolent Institution.

The favour of your support is earnestly solicited in behalf of Mrs. Eleanor Hopkins, aged 72. Mrs. Hopkins is widow of the late Dr. Joseph Hopkins, of Queen Square, Westminster, formerly of the Guards, and Physician to His Royal Highness the late Duke of Kent; and mother of the late Dr. E. J. Hopkins, Physician-Accoucheur to the Foot Guards, and one of the most popular teachers of his profession.

A series of unexampled calamities has reduced Mrs. Hopkins from affluence to penury. By the falling of several houses in York-street, Westminster, in the autumn of

1833, including a tenement of hers, held on copyhold, her last support has failed, and she is now, in her old age, entirely dependent upon the bounty of her friends.

Recommended by Her Royal Highness the Duchess of Kent; Sir John Swinburne; Sir George Duckett; Sir Astley Cooper; Sir Anthony Carlisle; Dr. Morris; Dr. Blundell; Dr. G. H. Roe; Dr. Golding; Dr. Clendinning; Dr. Robert Lee; Dr. Powell; Anthony White, Esq., President of the College of Surgeons; William Lynn, Esq.; George James Guthrie, Esq.; H. S. Chinnock, Esq.; C. E. Clarke, Esq.; G. C. Jonson, Esq.; Captain Bignold, R.N.

Proxies received by Mr. G. F. Knox, at the Westminster Hospital; *Lancet* Office, corner of Essex street, Strand; and the *London Medical and Surgical Journal* Office, 356, Strand.

THE WOMBAT.

This animal differs in the construction and mechanism of its hind legs from nearly all other burrowing animals.

It has no patella, but the tendon of the extensor muscle of the leg, in the usual situation of that bone, is much thickened, probably as a substitute for the patella.

The fibula is larger than in most animals; it has two articulating surfaces, the anterior joined to the tibia, and the posterior to a small pyramidal bone, connected with the tendon of the gastrocnemius like a sesamoid bone; the lower extent of the fibula is large, and forms about half of the articulating surface for receiving the tarsus at the ankle.

The fibula has a slight degree of motion on the tibia at its upper end, and a half rotatory motion at the lower end. Between the two bones is a strong muscle which passes from one to the other throughout their whole length. When this muscle contracts, it pulls the fibula forwards, and produces a degree of rotation on the tibia which turns the toes inwards. The muscle of the leg corresponding to the biceps flexor of the human subject is inserted into the posterior part of the fibula, and antagonises the muscle just described.

This mechanism is met with in two animals whose mode of life is very different, the one living on trees, the other not, but, as both burrow in the ground during night, its use is plainly for throwing back the earth.—*From a Lecture on the Zoology of Australia, by Dr. Litchfield.*

Foreign Medicine.

Cholera Morbus at Bilbao.

The following melancholy account of this formidable disease, which raged in the city of Bilbao, we extract from the *Gazette des Hôpitaux*, communicated by a physician, who witnessed its whole progress.

At the latter end of last August, the inhabitants of this city became alarmed, in consequence of this dreadful malady directing its course towards its environs. On the 25th of the same month, a few suspicious cases of cholera were observed amongst the inhabitants; nevertheless, the medical men made no particular remarks on these few isolated cases, and the inhabitants flattered themselves that it was not the true Asiatic cholera. But in a few days unfortunately they saw their error, and the ravages of the disease commenced. It is difficult to give an idea of the consternation and terror that pervaded throughout the city, when too truly the disease was verified by the medical men. On Friday, the 12th of September, five new fatal cases of cholera were reported. The next morning the thermometer rose rapidly, and the temperature of heat rose to an extraordinary degree, that even respiration was with difficulty carried on, and almost every one was affected with a degree of constriction about the chest, accompanied with extreme melancholy.

About five o'clock on the evening of this day, the thermometer stood at about 124 degrees. The sun was completely obscured from view by cloudy masses, and the wind, which was south-west, was so warm, that in turning a corner of the street, and meeting a current of air, it appeared like warm water thrown on the face; this sensation was almost immediately followed with a degree of nausea and extreme lassitude.

A very remarkable circumstance was observed on this day, and during the intensity of the epidemic, which was the sudden and nearly total disappearance of all the sparrows, which at other times so numerously inhabit this city, and they were not again observed

until the epidemic had nearly ceased its ravages in the city of Bilbao.

The same circumstance was remarked at Grenada, which city is, in general, quite noted for this species of bird. The flies, also, in a great part, had disappeared, which, before the irruption of the cholera, were extremely numerous, and the few that remained appeared struck with torpor; they collected about the windows, from which they fell as if dead, and left on the glass a whitish viscid mucus.

The days on which the greater number fell victims to the cholera, were on the 13th, 14th, and 15th of September. During these three days the disease raged with the greatest fury, resisting every kind of treatment. Scarcely any of those who were attacked on these days escaped death.

On the 13th, Saturday, and the next day, 116 fell its victims, and from the middle of Sunday to Monday, 94, and from Monday to Tuesday, 73.

From this time the disease began to decrease, but on the 20th and 25th, the number of deaths again increased, and, from this time to the 29th, so rapid was the decline of the disease that only three deaths took place in the twenty-four hours, and the next day not a single death was reported.

As regards treatment, every remedy was attempted, that had been found efficacious at London, Paris, and every other part of the world. Neither the phlogistic treatment of London, that is to say, brandy, calomel, opium, and stimulants of different kinds, nor the antiphlogistic treatment of Broussais, bleeding, leeches, ice, and refrigerants, had the least salutary effect, the most part of the patients perishing from the ravages of the disease.

The remedy which appeared in every case the most efficacious, was the common olive oil as used by the Spanish. This oil has been used in large and repeated doses, till the vomiting ceased, at the same time administering injections composed of rice water and tincture of opium, till all diarrhœa terminated.

As the invariable and certain forerunner of death, the occurrence of copious cold sweats were observed, extending over the superior surface of the thorax, whilst the inferior extremities were stiff and cold, as if already they had been struck with death.

If in consequence of cramp, which always occurred before death, a profuse perspiration and heat appeared on the superior surface of the body, it was, in almost every case, a certain indication of a rapid cure.

The difference of mortality between the sexes has been extraordinary—viz. 172 females to 1 male. The number of infantile deaths has not been considerable. Out of a thousand soldiers in the city and its environs, 300 became indisposed at the moment the disease declared itself. A very few of those healthy suffered, and 150 out of the 300 attacked died from the disease.

The rapid progress of symptoms, and the speedy and fatal termination which characterised many cases of cholera at Bilbao, struck alarm in the hearts of men, even the most courageous. One case amongst others will suffice to show with what rapidity the epidemic occasionally terminated the sufferings of the patient.

A young merchant, after taking lunch in the middle of the day, in apparently perfect health, in the course of an hour felt indisposed, and went to bed. In the space of a short time, all symptoms of well characterised cholera supervened with such severity, that, notwithstanding every effort of art, the poor fellow expired in two hours and a quarter, after suffering excruciating agony, and the body commenced so speedily to decompose, that it was necessary almost instantaneously to inter it; so that in the course of a few hours, he, who in the middle of the day was in the enjoyment of perfect health, at four o'clock was dead and buried.

The cholera in this city has not attacked or been confined to any particular class of individuals, as has been remarked in other parts of the world, but attacking all three classes of society without any distinction.

Though all the inhabitants of the city were not attacked, nevertheless no one was exempt from symptoms, (either real, or from the effect of fright,) of slight diarrhœa or general lassitude.

Many pregnant females were attacked by the cholera, even during the pains of parturition, and have perished either before its termination, or immediately on the birth of their infant. In some the Cæsarean operation was practised, but without success.

This is not the first time we have verified the efficacy of olive oil in epidemics the most

frightful. It is well known, that persons employed in its fabrication have been exempt from several kinds of pest, at least many authors that can be relied on have advanced this fact.

As to the increase of temperature at Bilbao during the progress of cholera, no being in the city ever experienced any heat so intense. A captain of a merchant vessel, who at the time of the epidemic was in this city, declared, that during the time he travelled in a burning climate (Africa), he never felt such a degree of heat. The following is a complete account of deaths from the commencement of the cholera at Bilbao till the time of its disappearance:—

12. Wednesday, the number of deaths amounted to . . .	5
13 From Saturday night to Sunday night	116
14. Sunday to Monday . .	94
15. Monday to Tuesday . .	73
16. Tuesday to Wednesday . .	36
17. Wednesday to Thursday . .	48
18. Thursday to Friday . .	32
19. Friday to Saturday . .	28
20. Saturday to Sunday . .	34
21. Sunday to Monday . .	20
22. Monday to Tuesday . .	35
23. Tuesday to Wednesday . .	24
24. Wednesday to Thursday . .	19
25. Thursday to Friday . .	28
26. Friday to Saturday . .	17
27. Saturday to Sunday . .	8
28. Sunday to Monday . .	3
29.	
	620

Out of 1,000, three hundred of whom were ill at the appearance of cholera, died 150 of the latter.

Deaths in the neighbouring parts 235.

Total deaths in the space of 16 days 1,000.

British Hospital Reports.

ST. GEORGE'S HOSPITAL.

Stricture of the Urethra.

A MAN named James Clarke was admitted several months since under Mr. Brodie's care with this affection. We understood from him that he had been previously in St. Thomas's Hospital, under Mr. Green's care, which he left, and came to St. George's.

His stricture arose, we believe, originally from the contraction of repeated virulent attacks of gonorrhœa (to the number of twenty or thereabouts), which, by the acrimony of their discharge, so contracted the mucous membrane of the urethra, as to cause one of the most obstinate and intractable strictures we have ever witnessed in the hospital. The remarkable success which, we have had frequent occasion to notice, has attended the persevering plan of treatment adopted by Mr. Brodie in strictures, led us to watch its results in this case with some care and anxiety.

It would answer no useful purpose, either for theory or practice, were we to go over the daily routine of treatment adopted in this case; it will therefore suffice if we add our published testimony to that of many others who witnessed the persevering care which was taken in the treatment of it. Instruments of every kind, catheters, sounds; bougies of wax, plaster, and catgut, curved and straight, were used and repeated in careful and persevering succession, according as the one or the other passed the point of contraction in the urethra. Sometimes one would succeed which at another time would fail, and *vice versâ*, whilst, at other times, no instrument could be passed into the bladder for an interval of many weeks, and the patient would pass his water during that time but by drops. The stricture was situated at the upper part of the urethra, a circumstance which most probably induced Mr. Brodie to repeat so frequently, to those who were present, the maxim, that the reason why strictures were so often declared to be impassable which really were not so, arose from the circumstance of surgeons generally neglecting to keep the point of the instrument against the upper surface of the urethra, which in nine cases out of ten would always insure the success of passing the contraction. The theory of this observation, however sound it might be, did not agree with its practice here, for, in spite of all endeavours made by all kinds of instruments, both in the hospital and at Mr. Brodie's private residence, where he (Mr. B.) thought he might have a better chance of overcoming the difficulty of the case by using his own instruments, all attempts failed. Mr. Brodie found, in general, that if he did not enter the stricture at the first essay he made, he never could do it, and so seldom was this accomplished, that we believe we may truly state, that the instrument did not reach the bladder more than twice. Mr. Brodie's own repeated assertion, indeed, bears us out in the statement. During the time these endeavours were being made, the patient's health, as might naturally be expected, occasionally gave way, and fever, diarrhœa, with irritation of the kidneys and bladder, occasionally showed themselves, but were always relieved and subdued by appropriate treatment. Finding that the ordinary treatment adopted in such cases did not prove successful, Mr. Brodie turned over in his mind the various other methods for relief in such cases, and selected the one followed and adopted by Mr. Stafford, as the most appropriate one. The man's general health being therefore good, and he having consented to it, Mr. Brodie passed a straight instrument, inclosing a stilette having a superior curved cutting edge and an inferior straight cutting edge down to the stricture, and thus lanced it three separate times. The operation lasted but for a few minutes, and appeared to give the patient most dreadful agony. A bougie was passed down as far as the incision, but did not penetrate into the bladder.

We saw the patient the day after the operation: his countenance was remarkably anxious, tongue white and furred, and pulse quick and small. He complained of pain over the region of the bladder, with difficulty and pain of passing his urine, except when lying on the abdomen, and there was sanguineous effusion under one side of the cellular membrane of the penis and scrotum.

These symptoms subsided under the use of rest in the recumbent position, opiates, and salines; and it now became a question, what plan was best to be adopted in such a difficult and intractable case. Two methods of treatment suggested themselves to Mr. Brodie, —to employ the stilette again and to extend the incision further, or to adopt the old method of practice, and cut down upon the stricture externally through the perinæum. Mr. Brodie, in consultation upon the case with Mr. Keate, named these plans to him and asked him for his opinion upon them. Mr. Keate answered, that he had had no experience in either; and then, at Mr. Brodie's request, examined the case further. Mr. Keate passed a sound down to the stricture, but could not overcome the obstruction; he made the remark, that the stricture being cartilaginous embraced tightly every instrument that entered it, and expelled it again by its own elasticity. The man was ordered back to bed, and Mr. Brodie, in conversation with Mr. Keate, remarked, that both operations, with the stilette and by cutting through the perinæum, were very difficult and dangerous, from the chance, in the one, of making a false passage, and in both, of there being effusion of urine into the cellular membrane of the penis and scrotum. Mr. Keate observed, that if effusion of urine happened from the use of the stilette, the incision in the perinæum could then be made afterwards. Mr. Brodie had never performed the operation by incision through the perinæum, and has but seldom used Mr. Stafford's instrument, which he considers requires great caution in its use, and is more applicable to short thin strictures, than to hard cartilaginous ones, as the present. It was determined that Mr. Stafford's instrument should be again used, and, if not more successful, the incision through the perinæum should be made.

Aug. 14th. Since our last report the patient's general health has rather suffered from the repeated attempts made to pass through the stricture, and the consequent irritation which they have caused. He has had repeated attacks of sickness and irritation of the stomach; his pulse is weak and low; skin hot, and his countenance very anxious. These symptoms subsided in a few days, but finding from the extreme irritation which the patient had suffered from the former operation with the stilette, that his constitution would not bear a repetition of it, Mr. Brodie determined upon cutting through the perinæum upon the stricture, whenever the symptoms of irritation should have subsided.

The man having materially improved in the course of a few days, he was brought into the operating theatre and placed on the table, bound in the same manner as in the operation for lithotomy.

Mr. Brodie, having previously consulted with Mr. Keate, determined upon cutting down upon the stricture through the perinæum, and proceeded at once to perform the operation. A grooved staff, having been passed down the urethra to the stricture, was held by Mr. Hawkins, and Mr. Brodie made an incision in the same direction and situation as in lithotomy, of about two inches in length; a small artery was divided, which was immediately secured, and the incision was deepened by two or three strokes of the scalpel. The wound was then examined by the operator's finger, and the patient made to strain, as in passing his urine, that the projection of the canal of the urethra might be felt. This was done, and Mr. Keate and Mr. Brodie, on examining the wound, felt convinced that the incision was made in the right direction. The wound was now rendered deeper still, and the patient requested to strain, when suddenly a gush of fluid took place, but from whence none could ascertain. Mr. Keate said that it came from the rectum, and at the same time a slight flow of urine trickled from the wound. A female catheter was now introduced by the external wound through the opening made into the urethra, and passed into the bladder, when the patient passed two porringerfuls of turbid urine, loaded with ropy mucus. The catheter was then secured from slipping into the bladder, and the man was sent to bed. The operation lasted about ten minutes, and, from the sinking of the patient's fortitude, must have been very painful. The patient was inclined to corpulency, and the extreme depth of the incision was about equal to the length of a common scalpel blade.

Mr. Brodie observed to the gentlemen present, that he should not say much to them then on the case, and he should make it the subject of a clinical lecture in a few days. Those who had witnessed the operation might well judge of what was passing in his mind, when he mentioned the case of a gentleman who had a troublesome impervious stricture, frequently combined with retention of urine, which he (Mr. Brodie) found great difficulty in removing. On one occasion this difficulty was so great, that to save the patient's life he was obliged to puncture the bladder through the rectum. He did so, and the urine all passed through a canula in the wound. The stricture being thus relieved at its posterior part from all urinary irritation, soon became tractable, and was then cured in the usual way, and the opening into the bladder through the rectum healed.

(*To be continued.*)

ROYAL COLLEGE OF SURGEONS.

Names of Gentlemen who received Diplomas during the month of October, 1834.—James R. Parkinson, Dublin; Stanlake H. Batson, ———; Richard Dyas, Dublin; Charles T. Carter, Newcastle-on-Tyne; Geo. Broad, Penzance; Richard T. Smith, Manchester-street; Wm. Archer, Sudbury; Joseph Hutchinson, Lincoln; Perceval Kirton, Quebec; Robert H. Rumick, Enniskillen; Richard J. Hunt, Wye; Zachariah R. Stewart, Blackman-street; Robt. Palgrave, Norfolk; Geo. Gill, South Normanton; W. Well, London; Rd. W. Martin, Chatham; Rd. Tristram, Roscommon; James Parkes, Bury, Lancashire; Geo. Harvey, ———; Charles Boyson, Newton, W. Swansea; Edgar Jones, Bristol; Henry T. Townsend, London; Thomas P. J. Grantham, Burgh le Marsh; Gordon Gwynne, A.; Robert James, Falmouth; John Barker, Rochdale; Edward Edmonds, Penzance; John Brownfield, Norwich; Edw. Thompson, Sheffield; John D. Botts, London; William Jones, Judd-street; Roger G. C. Gardner, Southwell, Notts; Edwin Allen, Crewkerne; John H. Cazer, Guildford; James Lister, Barnstaple; Samuel H. Evans, Belper; James Windle, Norton, Yorkshire; Richard L. Hopkins, A.; John C. Bellamy Yealnapton, Devon; Francis Harrison, Bombay; John H. Watson, R N.; Francis A. Young, Hawkhurst; Jas. Deane, Spalking; Robt. Marsh, Bath; Wm. Jones, Henley in Craven; Thomas Slipper, Ladham, Norfolk; Patrick H. Morris, ———; Samuel C. Gardner, Burnham, Essex.

APOTHECARIES' HALL.

Names of Gentlemen to whom the Court of Examiners granted Certificates of Qualification on Thursday, November 6th:—Edward Hyde, Witney, Oxfordshire; John Henry Bull, Lindfield, Sussex; John Barker, Ixworth, Suffolk; John Gonner Robinson, Colchester; Jesse Leach, Rochdale; Joseph Lancaster, Clifton; Frederick Bell, Torington, St. John's; Robert Kirby, Knaresborough; Thomas Edward Rawson, Kegworth; William Smith, Worcester; Edw. Williams, Denbigh; Godfrey Bingley Wadsworth, Boughton, Yorkshire; Henry William Rush, ———; John Milligan, Bradford, Yorkshire.

APPOINTMENTS.

Naval.—W. Lambert to be assistant-surgeon of the Excellent. J. Chalmers to be assistant-surgeon of the Ætna. J. H. Martin, super. assist.-surgeon of the Victory, to be hospital mate at Haslar. J. Kirk, M.D., to be assist. surgeon to the Raven. J. Taylor to be super. assist.-surgeon of the Victory, vice J. H. Martin, hospital mate at Haslar.

Military.—Assistant-Surgeon Michael Guliani, M.D., from the 43rd reg., to be surgeon to the 28th reg., v. Fraser, appointed to the Staff. Chas. Scott, M.D., to be assistant-surgeon to the 36th reg., v. D. Scott, promoted to the Staff. Hospital Staff.—Surgeon Archibald Campbell Fraser, from the 28th Foot, to be surgeon to the forces, v. Dr. J. Leath, who retires upon half pay. Assistant-Surgeon G. Gulliver, from the 71st Foot, to be assistant-surgeon to the forces, v. Dolmage, appointed to the 8th Foot.

DEATHS.

Dr. Moorhead, of Ballyshannon, Ireland. Dr. Joseph Howard, late of Ballibay, Ireland. Dr. Edward Fogarty, Co. Meath. Dr. William Kent, of Deptford.

WEEKLY BILL OF MORTALITY.

London, Tuesday, Nov. 11, 1834

Age and Debility	48	Heart, Diseased	1
Apoplexy	5	Hooping-Cough	8
Asthma	10	Inflammation	25
Childbirth	8	Inflammation of the Bowels & Stomach	4
Cholera	2	Inflammation of the Brain	3
Consumption	69	Inflammation of the Lungs and Pleura	11
Convulsions	26	Insanity	2
Croup	1	Jaundice	1
Dentition, or Teething	2	Liver, Diseased	4
Dropsy	7	Measles	9
Dropsy on the Brain	11	Mortification	2
Dropsy on the Chest	3	Small Pox	6
Epilepsy	1	Sore Throat & Quinsey	2
Erysipelas	1	Spasms	2
Fever	9		
Fever, Scarlet	17	Stillborn	15
Gout	2		
Hæmorrhage	1		

Males 167 Females 157 Total 324

Decrease in Burials reported this week 22

BOOKS RECEIVED.

The Medical Pocket Book for 1835, containing a Case Book and Almanack, with the Medical Corporations, their Regulations, &c.; an Account of the New Medicines, their Properties and Doses, and an Abstract of the Pharmacopœia, comprising the various articles of the Materia Medica, their Preparations, Properties, and Doses. By John Foote, Jun., M.R.C.S. Renshaw.

Quain's Anatomical Plates. Fasciculi XIX. and XX.

CORRESPONDENTS.

Mr. Brooke.—His communication on a new instrument for the tying of arteries must be again, we regret to say, deferred until next week.

In the Essay on Phthisis Pulmonalis, by Mr. Montgomery, of Mincing-lane, published in No. 143, we regret that so many typographical errors should have accidentally appeared.

METEOROLOGICAL JOURNAL.

MONTH. Nov., 1834.	Moon.	Thermom.			Barometer.		De Luc's Hygrometer.		Winds.		Atmospheric Variations		
6		60	64	53	29·45	29·56	80	80	S.S.W.	S.	Fine	Fine	Rain
7		57	65	50	29·25	29·29	80	78	S.E.	S.	Showry.	——	Cloudy
8	☽	54	54	49	29·26	29·26	76	79	S.S.W.	S.	Cloudy	——	Rain
9		52	53	47	29·26	29·26	80	64	E.	N.E.	Rain	Rain	——
10		46	47	40	29·61	29·83	64	77	N.	N.N.E.	——	Cloudy	Fine
11		47	51	41	29·97	30·07	77	74	N.	N.E.	Fine	Fine	——
12		43	46	39	30·09	30·07	74	75	N.E.	N.E.	——	——	Cloudy

50, *High Holborn.* William Harris and Co.

All Communications and Books for Review to be forwarded (free of expense) to the Publisher, 356, Strand, near King's College.

THE

London Medical and Surgical Journal.

No. 147. SATURDAY, NOVEMBER 22, 1834. Vol. VI.

LECTURES ON THE THEORY AND PRACTICE OF MEDICINE,

BY WILLIAM STOKES, M.D.,

Delivered at the Medical School, Park Street, Dublin.—Session 1833–34.

LECTURE XLII.

Opium in Fever—Dr. Latham's Opinion on—Adynamia—Treatment of—Use of Stimulants—Typhus, Symptoms of—Pneumonia of Fever—Symptomatic Affections of the Respiratory System in Fever—Phthisis, consequent of Fever.

Gentlemen,—I drew your attention at our last meeting to the employment of opium in the treatment of some of the nervous symptoms of fever. Before I leave this subject, I wish to lay before you a brief abstract of Dr. Latham's opinions on this point. I believe I may say, that one of the first persons who proposed and administered opium in fever, was the celebrated Sydenham. His opinion of it was, that after purgation it is generally productive of good effects. At the present day, there is considerable difference of opinion with respect to giving opium in fever, but there can be no doubt that it may be given with propriety in many cases, and that it has a powerful effect in combating some of the worst symptoms of typhus. Dr. Latham observes, "In some cases of fever, the disorder of the sensorium keeps pace with that of other parts; and thus the disease proceeds until it is somewhat advanced, when the harmony between its symptoms is disturbed. Those of the brain outrun the rest. New indications of treatment arise, and if the patient can be saved at all, it must be by opium. Thus the heart and arteries may be full of activity, and every symptom in proportion to it. Remedies are accordingly addressed to the vascular system, and succeed for every purpose they are intended to fulfil, *except one.* By venesection, or topical bleeding, the general symptoms are relieved, and each organ loses its peculiar distress, but still *the delirium continues.* With an improved state of the circulation and of other organs, this condition of the sensorium remains, and to this subsultus tendinum is liable to be added, and the unrestrained passage of the different evacuations."

"In such a case as this," says Dr. Latham, "I have seen a single dose of opium, dexterously administered, change the whole complexion of the disorder in a single night, and place the patient at once in a state of safety. Again, I have seen the sensorial affections incident to fever, which require opium for their cure, manifest themselves in another form. There has been high vascular action from the first, and large depletion has been required to subdue it, and guard particular organs, and especially the brain, from injury. Under such treatment all has gone on successfully, and the patient has reached the point of convalescence, when suddenly (the tongue, pulse, and all other circumstances continuing favourable) some strangeness of manner has arisen, and then the wildest delirium, and then the unrestrained passage of the evacuations. I have known a transition from such a state of convalescence to such a state of peril take place in a few hours, and I have known the patient again brought back to a state of convalescence in twenty-four hours, by a moderate dose of opium."

Three circumstances call for the employment of opium in fever; first, where there is persistent watchfulness; secondly, where an actual inflammatory condition of the brain existed, and has been subdued by proper antiphlogistic treatment, but delirium and other nervous symptoms still remain; and, lastly, where an excited state of innervation of the brain exists, without heat of scalp or remarkable throbbing of the arteries of the head.

There is another remark of Dr. Latham's which appears to me be so important, that I shall offer no apology for laying it before you in full. After observing that the affections of the brain in fever are capable of much illustration, from a knowledge of the habits and state of health of individuals before they become the subject of fever, he goes on to say, "And here I would make one general remark,

that by knowing what a man is, and how he lives habitually, the physician often arrives at a much better judgment, and a better treatment of his diseases. It is trying a man's diseases by his health, and a most valuable test it is.

"In healthy and vigorous bodies, there is a certain balance and regularity of function which, even when disease befals them, is seldom lost, but their morbid action is still harmonious and proportional. In them, diseases are often severe, but they are generally simple; they often require the most active remedies, but they are generally easy of cure. On the other hand, the weak and valetudinary, who, at the best, are full of jars and incongruities, are obnoxious to the strangest forms of disease, hard to understand, and hard to treat. Now fever, when it happens to a perfectly vigorous and healthy man, is never characterised by any such peculiar affections of the sensorium as have been mentioned. These are incident, according to my observations, to those only whose habits and mode of living have been calculated to do an abiding injury to the nervous system, and who have been long actually suffering from such an injury. Every class of society has furnished me with instances of this form of fever, and every instance has confirmed the truth of the remark.

"Among the higher and educated classes, there is in this age and country a wonderful striving for all the objects of wealth, and honour, and power. We need only think upon the strife of politics, the hazards of mercantile gambling, and the wear and tear of hard professional toil, to see how many there must be who, from the common business of life, have derived, both to their minds and bodies, new feelings and impulses, and new susceptibilities of disease. These susceptibilities chiefly belong to the brain and nervous system, and they are apt to come forth in frightful activity when such men become the subjects of fever. The trouble of the brain gets the mastery (as it were) of the disorder of every other part.

"The poor and mean among mankind have the mind overwrought, and the nervous system exhausted by real calamities, just as the high and educated by their more refined; and thus they often claim an unenviable approximation to them in the character of their diseases.

"To these moral causes," says Dr. Latham, "I will add one physical cause which is of most extensive influence, the habitual indulgence in spirituous liquors. Individuals who have done a permanent harm to the nervous system by the abuse of spirits, do never, when they become the subjects of fever, suffer delirium of the ordinary kind, in which the brain is excited nearly in the same proportion as the blood-vessels, and which by remedies addressed to the blood-vessels is uniformly controlled; but they suffer a delirium in which the brain is actuated disproportionately to, and (perhaps) independently of, the blood-vessels, and, if curable, to be cured by opium. This I venture to state almost absolutely and without exception."

Gentlemen, I can only state here, that the foregoing eloquent and philosophical observations are in perfect accordance with what I have observed of fever in Dublin. In all cases where the patient has been exposed to the depressing effects which high intellectual or moral excitement, or the abuse of spirituous liquors, produces on the nervous system, you will have, during the course of fever, more or less disorder of the sensorium. Here, but particularly if the delirium exists independent of any affection of the blood-vessels, opium is our sheet-anchor. With respect to the quantity to be administered, there are some cases in which it will be necessary to feel your way, and indeed I believe that in all cases this is the best and safest practice. In place of giving a large dose, as in delirium tremens, you commence with a moderate quantity, and if you find that this agrees with the patient, you can increase it; at all events, by pursuing this plan you will be certain of doing no harm. It frequently happens, too, that small doses act very well in this affection; you should therefore begin with a moderate dose, watch its effects on the patient, and then repeat it in increased or diminished quantity according to circumstances.

Towards the conclusion of my last lecture, I drew your attention generally to the subject of adynamia in fever, and endeavoured to show that in most fevers you have to contend with indirect as well as direct adynamia. Direct adynamia is that prostration of the system which results from the original disease; indirect adynamia is that which is produced by the reaction of the secondary local affections. I showed you that in many fevers we had, in addition to the debility consequent on an affection of the whole system, another source of adynamia depending on the local diseases which arise during the progress of fever, and that consequently the treatment of adynamia must vary according to the circumstances under which it occurs. I said that the indirect adynamia must be combated by local antiphlogistic means directed to the inflamed organs, but that in the employment of these means we should not be so vigorous as in cases of idiopathic inflammation, and that the general state of the patient should be always kept in view. You will readily assent to this proposition, when you consider that in idiopathic disease you have inflammation occurring in a constitution previously healthy; but in the case of local disease supervening on fever, in a constitution previously debilitated by general morbid derangement. It occurs, in fact, in that state of body in which there is a profound affection of the solids and fluids, of circulation, of digestion, and of the nervous system. You can therefore easily understand

why the antiphlogistic plan must be employed with more caution, and followed up with less vigour, in the treatment of those secondary affections which arise during the progress of fever.

I mentioned, too, that in most cases of advanced fever, and sometimes even at an early period of the disease, the employment of stimulants may be necessary, *even where the fever is accompanied by local disease.* A period occurs in all fevers (generally at the advanced stage), when general stimulation will be demanded, even though you may at the same time be able to detect local irritation. In such cases as these we might say that direct adynamia was predominant, and that, as danger was to be chiefly apprehended from this cause, we must meet it with stimulants. You will recollect I mentioned at my last lecture, that a state of the general system and of the local disease occurred at an advanced period, to which antiphlogistics were no longer applicable, and in which, by giving stimulants, we assisted the efforts of nature, and gained time for the treatment of the local affection; in a word, that the formula of treatment for most cases of fever was the same as in cases of idiopathic inflammation. In the early period we employ antiphlogistic means, both general and local; in the advanced stage we use stimulants and tonics. In all cases of simple inflammatory disease, a time arrives when you must change your hand, and have recourse to an opposite line of practice, and the same thing occurs with respect to fever, whether we view it as an original affection of the whole system, or as symptomatic of some local irritation. I showed you, too, that you might in many instances combine local antiphlogistics with a general tonic treatment, the latter to be regulated so as to support the patient's strength without increasing the local disease. It will often happen that in the advanced stage of fever you will meet with enteritis, or pneumonia, or some other local inflammation; here, while you are engaged in reducing the local inflammatory affection, you may also support the patient's strength with light nutritious diet, and even a little wine. In Dr. Grant's work on fever, there is an important remark bearing on this point, which I shall beg leave to quote. "I know," says he, "two physicians, both in considerable practice, and both honest men, who have constantly treated fever badly from different causes. The one never gave cordials, wine, or nutritious food, during the whole disease; the other, after the fourth day, never gave anything else. A combination of both these modes, employing each according to the circumstances of the case, would be very excellent practice. Their error, however, was not entirely the same, nor did the same effects result from these opposite modes of treatment. The patients treated by the physician who persevered in the antiphlogistic system seldom died, but their recovery was tedious and protracted. Those who were treated by stimulants throughout the entire disease seldom recovered." Observe, gentlemen, how well this agrees with the doctrines I have laid down for the management of fever. The first practitioner generally cured his patients, but their convalescence was slow and difficult, because he used antiphlogistics too boldly and too long. He was ignorant of the fact, that, after a certain period and at a particular stage of the disease, antiphlogistics lose their efficacy, and his patients may therefore be said to have recovered by the unaided powers of nature. He was ignorant also of the fact, that, at a certain period of fever, certain conditions of innervation exist, in which what are called stimulants have a powerful effect in removing the disease, even though characterised by symptoms which have been termed inflammatory; while he who used nothing but stimulants, being ignorant of the number and consequence of the local inflammations, lost his patients by a too early and indiscriminate stimulation.

I shall now proceed with the analysis of the symptoms of typhus and the proper mode of treating them. Having discussed those which belong to the nervous, let us now take up the consideration of those which characterise affections of the respiratory, system. Before, however, we leave the subject of nervous symptoms, I may mention that some researches have been lately made on the state of the spinal cord and ganglionic system in fever; but there has been no result from these investigations calculated to throw any *new light* on the nature and treatment of the disease. Indeed, it is a remarkable fact, that in many instances of fever remarkable for the extent and persistence of nervous symptoms, we cannot detect any lesion of the brain or spinal cord. In certain cases it has been stated that the sympathetic nerves were found diseased; but this occurs so seldom, and with so little constancy or correspondence of the existing symptoms with the derangement of the nerves, that it is impossible to establish any connexion between lesions of the ganglionic system and typhus.

I believe, I may say, that a considerable number of cases of typhus are either accompanied by thoracic symptoms, or, if they do exist, they are in general slight and easily manageable. In some instances, however, the pulmonary system is severely attacked; and, in many cases of this description, death is caused by asphyxia from exorbitant secretion, brought on by extensive bronchitis occurring during the course of fever. There is one general observation, which applies not merely to the derangement of the respiratory system, but also to the morbid changes which may take place in any viscus of the body during the progress of typhus; and this is, that the functional derangement observed in each particular organ during life is seldom in propor-

tion to the changes discovered after death. With symptoms of an apparently trifling character, and by no means calculated to alarm, you may, in the case of the lung, find after death marks of universal bronchitis, of enormous congestion, or extensive pneumonia. The same character of insidious latency applies to all the inflammatory affections which come on during the progress of fever. If we seek for an explanation of this fact, we shall, perhaps, find it in considering, that, during the existence of fever, the nervous system appears to be labouring under some profound injury; and we know that where innervation is injured sensibility is impaired, and hence the symptoms expressive of suffering or disorganisation are more or less latent. Hippocrates observes, in one of his aphorisms, that in cases of severe disease, where no pain is complained of, there is disease of the brain, thus accounting for the absence of suffering by referring it to some lesion of the sensorium.

In speaking of the catarrh of fever, I beg of you to bear in mind that this, like all the other inflammatory affections supervening on fever, is to be looked upon as a secondary inflammation. When I use the term catarrhal or gastro-catarrhal fever, I do not mean to express fever symptomatic of catarrh, or of catarrh combined with gastritis, but that the catarrh, whether simple or combined with gastro-enteric disease, is one of the results of fever. There can be no doubt that, in the majority of instances, this is the case. All the arguments which I have adduced to prove that affections of the brain were not the cause of fever apply also to disease of the lungs; and we shall find the same thing to hold good when we come to the digestive system. The experience of Andral, Louis, Laennec, and various British authors, who have written on fever, perfectly coincides on this point. You will see, in Laennec's work on auscultation, that he has devoted a good deal of his attention to those secondary affections of the lungs which occur during the progress of fever.

Now, in many cases, this bronchitic derangement may exist during the whole course of the disease without any degree of violence, and the patient will recover without having any attention paid to it; in fact, many will go through fever with lesion of the bronchial mucous membrane so slight as to have no claim to notice. The occurrence of an affection of so trifling a character as this, is not sufficient grounds for altering or modifying your prognosis; still it should always put you on your guard, for it may, in the course of six or seven days, become greatly exacerbated, assume a very intense character, and even carry off the patient. Whenever, then, you discover any increase in the bronchitic symptoms, direct your attention immediately to the state of the lung, and be on your guard lest the disease should get ahead of you. What we generally observe in these cases is, that the patient has some cough, but this is neither hard nor troublesome; you can hear now and then a few sonorous râles over the chest, but it sounds quite clear on percussion. Such a case as this, as long as it remains unchanged, is of very little consequence. In some instances, however, the affection of the bronchial membrane becomes a most formidable symptom: the patient has lividity of face, cough, hurried breathing and expectoration, and all his symptoms point out the existence of a very extensive disease of the lungs. In other cases, the symptoms of bronchitis may be almost entirely absent; and yet, if you make an examination with the stethoscope, you will detect the existence of a latent but general and intense bronchitis. Here, persons unacquainted with the stethoscope, and depending on symptoms only, may be led into great and fatal errors. Nay, even persons acquainted with the use of this instrument may, by neglecting to make a proper examination, fall into great mistakes. Thus, if you apply the stethoscope to the patient's chest while he is lying on his back and breathing in the ordinary way, all you can ascertain is that there is feebleness of respiration, with here and there a sonorous râle. If you were to content yourself with such an examination, and decide as to the state of the bronchial mucous membrane from the signs afforded by ordinary respiration, you would be wrong; for though the râles may be few and scattered during ordinary breathing, you will find that when you raise the patient up and make him take a full inspiration, so as to cause the air to enter the minute bronchial tubes and air vesicles, the râles become intense and are audible over a large portion of the lung. You will find also, that the disease generally affects the middle, inferior, and posterior parts of the lung, and that it produces here symptoms approximating to those of pneumonia. Another curious circumstance, connected with cases of this description, is, that, according as the patient gets better, the râles become louder and more distinct; and here we have the apparent anomaly of an increase of the morbid sound, pointing out a decrease of the disease. This is explained by recollecting, that, at the height of the bronchial affection, the minute bronchial tubes and air vesicles are chiefly engaged, and, as from the engorgement of the lining membrane, the quantity of mucus which fills them, and the feeble state of respiration, the air either does not enter into them, or, if it does, only imperfectly, the consequence is that the characteristic râle, or morbid sound, is scarcely heard. But when the disease is on the decline, and the minute tubes become free, the bronchial affection being then chiefly confined to the larger tubes, we can hear the sonorous râle distinctly during ordinary breathing. Many cases of this kind terminate fatally. The patient continues in a low adynamic state, with hurried breathing, and lividity of face for two or three days; then comes a rattle in the throat, and in the course

of ten or twelve hours he dies. On dissection the marks of general bronchitis are evident, and the bronchial tubes are found filled with a sanguinolent mucus. In some of these cases super-secretion from the bronchial mucous membrane sets in with extraordinary rapidity, and carries the patient off at once.

This form of disease is ordinarily co-existent with derangement of the gastro-intestinal mucous surface, and this forms one of the most common and fatal varieties of fever in this country. In some cases the disease predominates in the respiratory, in others in the digestive, system, and in some instances you will see a very curious alternation of this predominance of morbid action between the thoracic and abdominal cavities. To-day the breathing is hurried, the cough troublesome, the stethoscopic signs well marked; in two or three days after the cough disappears, and the breathing is relieved, but the belly is more swollen and tender, and the tongue has become redder and more parched. Then the abdominal symptoms will improve, and the indications of pulmonary irritation become again more manifest, and thus, even during the course of the same fever, we may have several alternations of this kind. This complication of disease of the thoracic and abdominal cavities is extremely common in fever; in fact, it may be almost laid down as a general rule, that, in the affections of the respiratory system in fever, there is a complication with disease of the digestive tube. Now you should always bear this in mind, and, when you prescribe medicines to relieve the pulmonary affection, you should take care that they shall not produce irritation of the digestive system.

In most cases of severe bronchial inflammation you will observe more or less lividity of countenance. This is not seen in cases of simple pneumonia occurring in fever. Bronchitis has a much more powerful effect in producing this phenomenon than pneumonia, and hence it is that slight bronchitis will cause more lividity of countenance than extensive pneumonia. This fact seems to be in accordance with the opinion, that the portion of the lung, in which the process of aëration is carried on, is the bronchial mucous membrane and not the air vesicles. In inflammation of the air-cells of the lung we have little or no lividity, but we never see a case of extensive bronchitis without it. I may mention here, also, that I have seen several cases of bronchitis with very remarkable lividity, in which the temperature of the body was above the natural standard, thus giving a direct proof that animal temperature depends on some thing else besides the aëration of the blood.

We come now to speak of the pneumonia of fever. This affection may occur under two forms, that is to say, its symptoms may be manifest and prominent, or they may be latent and inappreciable, except through the medium of auscultation. Of these forms the latter is the most common. You may in typhus have all the symptoms present which characterise idiopathic pneumonia, you may have hurried breathing, cough, pain in the chest, bloody expectoration, &c.; but, I believe, that, in the majority of cases, the pneumonia of fever is more or less latent. It often happens, that, at an advanced period of fever, without any increase of dyspnœa, or cough, the patient gets worse, and this change you may be sure is indicative of some great visceral lesion. The pulse gets smaller and more feeble, and, on making an examination, we generally find the cause to be an extensive but latent pneumonia. Without manifesting its existence by any of the usual symptoms, the disease comes on insidiously and rapidly, and, on examining the chest with the stethoscope, we hear the crepitating râle over a large portion of the lung, and the chest sounds dull on percussion to a very considerable extent. Observe here, gentlemen, the importance of a thorough knowledge of auscultation. I think I may safely venture to assert, that a person, ignorant of percussion and the stethoscope, is totally incompetent to undertake the treatment of any case of fever. I know it has been asserted by some authors, that these affections of the respiratory system are more of a congestive than an inflammatory nature. To this opinion I cannot subscribe. We find in such cases, on dissection, all the pathological appearances of active inflammation, redness, thickening, and ulceration of the mucous membrane, sanguinolent secretion, congestion, hepatisation, purulent infiltration, and even abscess of the lung.

It is a very remarkable circumstance, that the pleura seems, of all the pulmonary tissues, to be the least liable to morbid alterations in fever. From the details of a great number of modern dissections it appears, that, in many cases of fever, where extensive bronchitis and pneumonia were found to exist, the pleura has in almost every instance escaped. If this be true, it would seem to point out some difference between ordinary idiopathic pneumonia and the pneumonia of fever. In the former we have generally more or less pleuritic inflammation, in the latter it is rarely met with. There is in most cases of bad fever an effusion of bloody serum into the cavity of the pleura, and the same thing has been observed in the case of animals who have been poisoned by the introduction of putrid substances into the veins. This leads us to the knowledge of a fact connected with the history of typhus, that the tissues which are most liable to secondary inflammation are the mucous membranes and parenchymatous organs. On the other hand, the serous membranes seem to enjoy a comparative exemption from active disease. We meet with arachnitis now and then, but very seldom with pleuritis, pericarditis, and still more rarely with peritonitis. Though you may have extensive pneumonia in the chest, or enteritis in the belly, you will have no trace of the existence of inflammation of the peritoneum or pleura; and there can be no doubt that serous membranes are least liable to in-

flammation in fever. We might attempt to explain this by considering that serous membranes possess but very little sensibility, and consequently are less susceptible of irritation. In the healthy state they seem to be insensible, and we cannot trace nerves in their substance or on their surfaces. This insensibility appears to be one cause of their exemption; another is, that they are supplied with white blood, a portion of the circulation which seems to be least altered in fever, that which is most affected being the fibrine and colouring matter.

Let us now discuss the symptomatic affections of the respiratory system in fever. You may have dyspnœa, hurried breathing, and cough, and yet, on examination, you cannot find any distinct signs of bronchitis or pneumonia. You will often meet with symptoms of pulmonary derangement in fever, and yet, when you come to apply the stethoscope, you find either no sign of disease, or, if there be any, quite insufficient to account for the symptoms. Under these circumstances, the affection of the chest must be looked upon as sympathetic, and the disease which is its most common cause is gastro-enteric inflammation. Here, again, we have another remarkable instance of the value of the stethoscope. Symptoms indicating marked pulmonary derangement exist, and if we had not this means of regulating our judgment, we should most probably conclude that there was actual disease of the lungs, and would proceed to treat a sympathetic for a real affection. But, by the aids which physical diagnosis affords, we arrive at a knowledge of the real seat of the disease, and are enabled to direct our curative measures with certainty and effect. But, when I say this, I beg of you to understand that I do not mean that you should be satisfied with a slight or single examination of the case. It may happen that these symptoms (wholly dependent on sympathetic irritation) may go on in this way for several days, and then a change may take place, and *organic disease of the lung supervene.* It is a common but, generally speaking, a true observation, that sympathetic irritation of any organ (when long continued) has a tendency to terminate in actual disease. The circumstances which favour this change are, first, the excessive violence of the functional derangement, and, in the next place, its long continuance. You must be, therefore, on your guard, and examine the chest from day to day, and if any signs of inflammation appear, meet them with promptitude, and you will generally succeed in averting dangerous consequences. There is another circumstance worthy of remark. If you have sympathetic irritation of any organ without fever, the chances are that it may go on for a long time without producing any bad effects, but if it be accompanied by fever, there is a greater probability of its being converted into organic disease. This should make you cautious in cases of sympathetic affections of the lung in fever. As far as my observation goes, I would say, that when disease of the gastro-intestinal surface is followed by an affection of the lung, the morbid action generally takes place in the left lung and in its lower lobe. There seems to be a greater sympathy between the left lung and the stomach, than the right, and you should therefore direct your attention particularly to the left side of the chest. It is a curious fact, that inflammation of the lower part of the left lung is very frequently connected with pericarditis and gastritis. There seems to exist a very remarkable sympathy between organs on the same side of the body. This is a curious fact, and demands some other explanation besides that which was given by Mr. Hunter, who attributed it to contiguity of position.

The last subject to which I shall allude is, that a liability to chronic disease of the lung very frequently occurs in those cases of pulmonary derangement during fever, and this is apt to come on after the symptoms of the original attack have subsided. In several instances of this kind, you will observe that the bronchial symptoms which are present in fever, and which do not excite any degree of alarm, will very often, on the subsidence of the fever, assume a more threatening character, and pass into phthisis. There is something in the course of fever which has a strong tendency to develope tubercles in persons who are in any way liable to them. We have had numerous examples of this fact among the fever patients treated in the Meath Hospital. Such of you as are anxious for more detailed information on this point, I would beg leave to refer to some researches of mine on this subject, published in the Transactions of the College of Physicians. In the epidemic of 1826 it was a common thing to see our patients, after recovering from fever, attacked and carried off by phthisis. This form of phthisis ran through all the usual stages, from the recent formation of tubercles up to the formation of cavities, and was generally very rapid in its progress. In one case the patient died of consumption in seven days after the subsidence of the fever.

If, then, you find towards the close of fever, that the patient has dulness under one or both clavicles, with feebleness of respiration, and the other signs of phthisis, you should be on the look out for tubercles. If you find the dulness increase every day, you may be pretty sure of the occurrence of tubercular development. On the other hand, you should remember, that of all the cases, in which bronchitis is most likely to simulate phthisis, it is when it comes on after fever. A patient, getting an attack of bronchitis after fever, will, in that weak and debilitated condition, exhibit in a short time all the symptoms of phthisis. He will have bad cough, laborious breathing, great emaciation, and well-marked hectic. Yet in many instances I have seen such patients recover under a judicious treatment.

To-morrow, gentlemen, we shall again take up the consideration of the pulmonary system, and this, with some observations on the se-

condary lesions of the gastro-intestinal surface, will conclude what I have to offer on the subject of fever.

LECTURES

ON

MIDWIFERY & THE DISEASES OF WOMEN AND CHILDREN,

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Delivered at St. Thomas's Hospital.

LECTURE VIII.

Anormal Growths of the Uterus.

GENTLEMEN,—The female system is known to possess remarkable powers of development, and this is particularly the case in the generative organs, especially the uterus; no organ throughout the human system, besides the uterus, possesses the power of enlarging to ten or twelve times its original size, from actual increase of substance, and again returning to its original bulk; the ovaries, as being the first source of new formation, can alone be compared with it in powers of re-production. This holds good also in a pathological point of view, and the female organs of generation, especially the uterus, are the seat of a great variety of organic changes, both as to form and structure, diseases which, although they offer but little scope for treatment, present both an interesting and important field for observation, as respects their origin, diagnosis, and results.

These morbid growths have been classed by Dr. Hooper, who is the best modern authority upon this subject, under the following names:—*chondroma*, or cartilaginous formation; *osteoma*, or bony growth; *cephaloma*, or brain-like substance, the medullary sarcoma of Mr. Abernethy; *hæmatoma*, commonly called fungus hæmatodes; *hygroma*, or tumours distended with fluid; and *lipoma*, or adipose tumour.

Pure cartilage seldom forms the structure of a whole tumour, but occurs in detached portions through a structure which, although it resembles cartilage, is much softer; this is the *sub-cartilaginous tumour*, the most common of all the morbid growths to which the uterus is subject, it is much softer and more pliable than the cartilaginous tumour, is frequently found in the substance of the uterus, often merely attached to it by the peritoneum, and it is likewise found in and adhering to the appendages, occasionally it is seen in the cavity of the uterus; it is usually called *the fleshy tubercle of the uterus*. It is generally met with near the external surface of this organ, and a considerable portion of the tumour is in many instances covered merely by the peritoneum; is sometimes found very near the cavity of the uterus, into which it perhaps projects more or less, and then the projecting portion is covered only by the membrane which lines the cavity. It is far from usual to find this tumour completely within the cavity, but it is occasionally, and, in these instances, it is in close contact with the membrane which lines the cavity. Its adhesion with the membrane is always very slender, and it is more by nutritious blood-vessels than by fibrous tissue. This tumour is found of all sizes, from the smallest lentil to that of the largest gourd, even within the cavity of the uterus it acquires a great size: Dr. Baillie says he has seen it here "a good deal larger than a child's head," and Dr. Hooper, "larger than the head of any adult."

In two of the preparations upon the table, this tumour has attained a size fully equal to that described by Dr. Hooper. This species of chondroma consists of a substance approaching in firmness to cartilage; at first sight it does not appear like cartilage to the naked eye, but, after cutting it, and pressing it between the fingers, and carefully examining it, the gristly nature is apparent, more especially if viewed by a magnifying power; in the interior of some there are firm bands, or cords, which appear like nerves; these are formed of a strong fibrous substance, and they bifurcate, or ramify, in different directions; in the centre of those tumours which have acquired a considerable size, or near to the centre, small nodules of perfect cartilage are frequently found, and sometimes masses of calcareous matter, and in some, layers and lumps of bone. The natural substance of the uterus, in which the tumour is imbedded, is almost always found to have undergone a decided change, having become more distinctly fibrous, and the fibres more obviously fasciculated; the quantity of these fibres (i. e. the fleshy fibres of the uterus) is very much increased, so that the diseased structure is often surrounded by very thin and extended uterine fibres, so thin as not to exceed the thickness of a wafer *.

Osteoma not only comprises bony tumours but those which resemble enamel, or bear a chalky character; they are found in the substance and within the cavity of the uterus, in the broad ligaments, and tumours of bone are also found hanging to the appendages of the uterus by a peduncle formed of the peritoneum, but they are not common; these tumours are composed of phosphate and triple phosphates of lime, with a little carbonate or phosphate of soda, mixed with cellular tissue, which pervades the whole of their substance, but not any in the calcareous; bony tumours are also found in the ovaria †. These tumours vary considerably in size, from a small bony or earthy deposit to many pounds in weight. Carus mentions a case, where the ossified uterus weighed five pounds and a half, and required

* Hooper's Morbid Anatomy of the Uterus.
† Op. cit.

two hours to saw through the mass, and Dr. Hooper describes having seen a uterus the size of the head of an adult, irregular upon its surface, and formed wholly of hard bony matter, surrounded by the expanded fibres of the uterus, and in many parts covered only by the peritoneum.

I now come to a disease which, although it affords little or no diagnostic marks during life, presents appearances after death which cannot easily be mistaken. This disease, which has been called the soft cancer of the uterus, the medullary sarcoma of Mr. Abernethy, the *cephaloma*, or medullary tumour of Dr. Hooper, consists of an organised soft vascular substance, which resembles brain in appearance and feel; the whole of the uterus is sometimes converted into it; occasionally it is a tubercular circumscribed tumour, occupying a part of the uterus, and it occurs also as a polypus. A cephalomatous uterus is generally very much larger than a healthy one, the cut surface is of a pale yellowish flesh colour, more like to brain than any thing else; to the eye it does not appear very vascular, and when a portion is cut, the knife retains a humid paste, or cream-like substance, which oozes also from the cut surface when moderate pressure is applied; the vaginal portion of the uterus is much enlarged in this disease, and the cervix is in some cases lost by the enlargement of the body having extended to the very lowest portion; the os uteri is mostly very open, or widened, the labia, or sides, are very soft, and their internal surface, as far as the cavity of the uterus, is often ragged. Cephaloma of the uterus is much less vascular than hæmatoma, and no blood-like portions are found intermixed with the medullary; this disease appears in the vagina like a fungus projecting from within the cervix uteri, it seldom extends through the os externum. In many instances the cephaloma is not confined to the uterus and vagina, but spreads fungus-like to the adjacent parts; adhesions to the intestines take place, and tuberculous brain-like projections are detected within them; large portions of the same cephalomatous substances are in some cases found in various parts of the pelvis, sometimes surrounding the rectum, and narrowing its canal, and pressing on the neck of the urinary bladder.

I here present to your notice one of the most valuable preparations in my museum, and which I look upon as almost unique; it is cephaloma attacking the uterus, its appendages, and portions of the small intestines; the whole uterus is uniformly enlarged and converted into a soft brain-like substance; a portion is removed to expose its structure; the cavity and sides are enlarged and ulcerated; the cervix and os uteri are pulpy and flocculent. The lady, from whom this mass was taken, suffered many years from profuse hæmorrhage, she was mother of eight fine children, and for several years before death had constantly a vitiated discharge from the vagina. Tubercular masses of the same cephalomatous substance nearly conceal the appendages, and a portion of ileum, which is adherent to the posterior part of the fundus, is involved in the same organic degeneration; when removed from the body, and placed so that its structure could be seen in the presence of several medical gentlemen, they all compared it to the brain, particularly Dr. Merriman.

Fungiform states of cephaloma are likewise occasionally found in the upper part of the vagina, where it is tubercular; this condition is beautifully illustrated by the preparation which I now show you, and which is the original specimen, from which Dr. Hooper's 13th plate was taken; it is a tubercular mass of cephaloma, which has arisen from the cervix uteri, and projects polypus-like into the vagina. In his description of this preparation, Dr. Hooper states, that "between the vagina and rectum of this subject there was also a tumour, the size of a large orange, which made its way into the bowel, and had no connexion whatever with the disease here represented." This form of cephalomatous polypus sometimes becomes a ragged foul ulcer, which corrodes the whole cervix and a great part of the body of the uterus. Cephaloma is not often found in the ovarium, and then, I believe, only occurs by spreading from the uterus.—[Other preparations of cephaloma uteri were shown].

Hæmatoma, or blood-like tumour, occurs in the uterus as an organised, soft, vascular substance, resembling solidified blood, with an appearance here and there of spongy and more flesh-like portions; it is mostly fungous and lobulated, and therefore commonly called *fungus hæmatodes*. In the vagina it is mostly polypoid, and very rarely tubercular. In most instances it is found to have originated by a broad base within the cervix uteri, and to have extended into the vagina, and destroyed the vaginal portion. In the vagina it presents a broad ragged tumour, occupying the whole of the upper part, and having very irregular lobes or portions, which, to the finger introduced into the vagina, feel like as many polypi. In some instances it extends more towards the rectum, and makes its way into the bowel; in others it takes a direction towards the urinary bladder, the sides of which are absorbed, and the disease is found projecting within its cavity. In some cases both the urinary bladder and rectum contain fungiform portions, which are readily traced to the uterus. When divided, the cut surface of this disease is smooth, like firm coagulated blood, or like the albuminous part of the blood when solidified; patches of vascularity here and there are distinctly seen, and in many parts the structure is fibrous and spongy. The knife is soiled which cuts this disease, and, in most instances, humid, paste-like, and somewhat reddish matter oozes from the cut surface when pressed. The lobulated portions within the vagina, bladder, and rectum, have externally a sanguineous

and somewhat ulcerated appearance, and the surface is here and there covered with a thin, ragged, membrane-like production. The body of the uterus with this disease is always considerably enlarged, and it is much softer than in a healthy state, its cavity is expanded, and its internal membrane highly vascular. Hæmatoma of the ovarium is of very rare occurrence *. The preparation which I hold in my hand has been delineated by Dr. Hooper in his 8th plate, or, at least, bears a very close resemblance to it; it is hæmatoma of the uterus, which has destroyed the cervix, nearly filled the vagina, and made its way into the rectum.

The *hygroma*, or watery tumour, occurs under a great variety of forms, affecting the ovaria and Fallopian tubes more frequently than the uterus itself. Instances have been met with of the uterus being distended by an immense quantity of serous fluid, and which has been supposed to be the contents of a single hydatid; this, however, is very rare, nor has Dr. Baillie ever seen a case of it: the only species which bears any resemblance to this which I know of, is the mola aquosa, where the fœtus has died at an early period, and where the membranes of the ovum have formed a cyst of watery fluid. The more common species of hygroma uteri occurs under the form of a mass of vesicles or hydatids, and we occasionally meet with collections of these to the amount of several pounds. This diseased structure somewhat resembles the vesicles which are occasionally found in the choroid plexus of the brain; it has a very peculiar appearance, and resembles a bunch of grapes more than anything else. The vesicles are of all sizes and forms, from a millet-seed to a long grape; some are round, some oval, some oblong; all are smooth, shining, transparent, and the fluid of a yellowish colour and serous consistence; they are connected together by filamentous peduncles, which do not appear to be organised, but formed of a firm fibrinous substance; there is no adhesion or connexion between them, except by the filamentous peduncles from which they hang. Whatever nourishment they receive, therefore, is either through these peduncles, or from the somewhat glutinous fluid with which they are besmeared, and which surrounded them in utero. The dissection of a large vesicle demonstrates only one tunic or membrane, without any trace of vascularity, or any communication with another vesicle. Hitherto this disease has never been found in any other situation than the human uterus, from which it has been expelled during life after the manner of labour, which it much resembles. In most cases the quantity is very considerable; in the case which afforded the preparation before you, there were near four pounds, and not less than 6000 vesicles. This preparation has also been published by Dr. Hooper, and forms the subject of his last plate. A variety of opinions have been entertained respecting the formation and nature of these growths. Some have considered them to be hydatids, and have named them the *tænia hydatigena*, *tænia vesicularis*, *acephalocystis racemosa*, &c., and in all probability in many cases this is the correct opinion. In others, however, the disease is decidedly of a very different nature, having had its origin in a blighted ovum, where the venous radicles of the chorion, which give it that tufted vascular appearance, have become dropsical and distended into vesicles. I see no reason to suppose that the placenta at a later period can put on this appearance, as it is well known that a dropsical placenta presents a very different structure.

Hygroma of the ovarium occurs under different forms, and sometimes attains a large size, when it receives the name of *ovarian dropsy*. The cyst may be simple or compound, consisting of one cavity, divided into cells or pouches by transverse septa, or containing a number of small cysts one within the other. The parietes of the sac consist generally of a strong, white, ligamentous, or sub-cartilaginous membrane, having a pliability and feel not unlike thin India rubber. In some cases the membrane is thinner and semi-transparent, whereas in others it is perfectly pellucid, containing a number of transparent vesicles, resembling acephalocysts. The contents of these tumours vary; it is sometimes ropy, and so tough as can scarcely be removed, its consistence as firm as jelly, and very glutinous. Thus we not unfrequently meet with cases of ovarian dropsy, where, upon puncturing the cyst, but a small quantity of fluid comes out, and the aperture is then closed by some of this gelatinous substance, which sometimes admits of being gently drawn through the wound to a very considerable quantity; in other cases the cyst is filled with serous fluid, in others with pus, and in others with a perfectly transparent fluid, containing a small quantity of albumen. The cyst is rarely vascular; but there is one form which Dr. Hooper describes, where its internal surface is covered with an exceedingly vascular membrane; except this last species, I have seen every one of the above mentioned modifications of ovarian hygroma in the same subject.

The diagnosis of these various anormal growths and degenerations is often attended with great difficulty. Not unfrequently, from the inconsiderable derangement which they at first produce in the state of the general health, they pass entirely unnoticed for some time; and it is rarely that the practitioner is called upon to examine the case until the disease has made a considerable progress. As these tumours are seldom dependent on an inflammatory process, the chief of our information must be gathered from the derangement which they produce by pressing upon and otherwise

* Hooper's Morbid Anatomy of the Uterus.

injuring the functions of the adjacent organs, and from the vaginal examination. The latter means of diagnosis becomes here of great importance, and is almost our only guide, although it seldom gives us much information during the early stages of the complaint. Among the symptoms produced by the presence of the tumour, we may enumerate a sensation of pressure, fulness and weight in the pelvis, pains extending down the lower extremities, and to the urinary organs and rectum. As the uterus increases in size, the patient experiences difficulty in passing her urine and fæces; the digestion becomes deranged; her appearance is cachectic; ascites and œdematous swellings of the feet follow; the functions of the generative organs are debilitated; the menstruation is irregular, being either too profuse and too frequent, or too sparing and seldom. Leucorrhœa, and when the disease is far advanced, sterility follow, though this latter result is not necessarily the case where the tumour is not very large, a fact which I have occasionally witnessed, and which renders the diagnosis still more complex and difficult.

Upon external examination, we find that the breasts are occasionally unequally swollen and painful; the abdomen more or less distended, according to the size of the tumour; the hardness above the symphysis pubis frequently resembles that of a uterus four or five days after labour: examination, per vaginam, will enable us to ascertain that the swelling is produced by the uterus, and to distinguish it from any other morbid growths in the abdomen. By examination, per vaginam, we shall also find the cervix uteri somewhat swollen, the os uteri generally open, and its lips more or less enlarged; but where the tumour is situated in the upper part of the uterus, little change will be produced in the mouth of the womb, except that its position is perhaps somewhat altered:—thus, for instance, in cases of subcartilaginous tumour imbedded in, or attached to, the posterior part of the fundus, the os uteri will be tilted up behind the pubes; where the chief mass of the tumour is to one side, the os uteri will generally be pushed to the other; in other cases where the whole substance of the uterus is engaged in the disease, the changes in the condition of the os and cervix are much more considerable; it feels hard, uneven, and knobby, and is much enlarged; the edges of the os uteri are hard and sometimes irregular, at others, soft, spongy, and ragged. Thus, for instance, in subcartilaginous tumour, or fleshy tubercle as it has been called, the chief changes to be perceived, both externally and internally, are those produced by the pressure and distension of the mass, and the os and cervix uteri seldom undergo any alteration of size or feel, although their situation in the pelvis is occasionally remarkably changed. Thus we sometimes find all the symptoms of retroversion produced by a tumour of this sort attached to the posterior part of the fundus. There is complete retention of urine and fæces, and the os uteri will be found high up behind the symphysis pubis. Under such circumstances I have seen a tumour of this sort forced down into the pelvis by the straining of the patient, and so exactly to resemble the child's head, as nearly to mislead an experienced practitioner. Sometimes small masses of unequal size and irregular shape project into the cavity of the pelvis, so as to bear a considerable resemblance to the parts of the child, and require an intimate acquaintance with the whole phenomena of pregnancy to be able to form a correct diagnosis. The progress of the disease must be carefully ascertained; its duration, and the regularity with which it has advanced, must be compared with that of pregnancy; the age, and state of the patient's health, must be taken into consideration; and the situation and condition of the os uteri must be carefully noted, as before mentioned.

Examination, per rectum, is frequently a means of affording much assistance in our diagnosis, as we can thus sometimes ascertain the shape and consistence of the tumour more correctly. The subcartilaginous tumour, or fleshy tubercle, produces no other symptoms than those resulting from the pressure which it occasions to the neighbouring viscera, and the displacement which its weight produces in the uterus itself. It appears to be insensible to the touch, and is unaccompanied with any of the lancinating pains which characterise cancer. It has been mistaken for ovarian dropsy, and for pregnancy. The first is an error of little importance, as both of the diseases have few, except mechanical, symptoms, and neither interfere with life, unless by pressing upon parts in their neighbourhood. However, these cases, by care, may be generally distinguished. Although both tumours may be traced to the pelvis, and are circumscribed, the fleshy tubercle of the uterus is much more resisting than the cyst of an ovarian dropsy. In a dropsical ovary fluctuation may be felt by striking the abdomen gently with the hand; but no such fluctuation is felt in fleshy tubercle of the uterus. It is only in the early stages of fleshy tubercle that it can be mistaken for pregnancy, because when the tumour of pregnancy rises above the brim of the pelvis, the motion of the child may be felt. The tumour of pregnancy after this time increases quickly, that of fleshy tubercle, slowly. The growth of the fleshy tubercle is always slow, having sometimes, in the course of several years, increased very little in bulk; besides, if the tumour should have been felt for a longer time than is allotted to the period of utero-gestation in women, this becomes another diagnostic. No dependence can be placed on the state of the menstruation, because in pregnancy coloured discharges occasionally take place, and in fleshy tubercle of the uterus the menstruation is sometimes wholly obstructed*.

* C. M. Clarke on Diseases of Females.

LECTURES
ON
FORENSIC MEDICINE,
DELIVERED BY
DR. HAY GRAHAM,
At the Westminster School of Medicine.

LECTURE VI.
Abortion.

Gentlemen,—In this lecture I propose to treat of abortion wilfully and criminally procured. Of all crimes this is, perhaps, the most difficult of proof, not only from the nature of the body to be submitted to our investigation, but also because the expelled fœtus, the *corpus delicti*, is frequently removed from sight, which may be accomplished when pregnancy is not far advanced without even exciting suspicion. Yet, under the most suspicious circumstances, abortion may be the result of accident, of disease, or of bodily predisposition: thus, in most cases, the proof must ultimately rest on circumstantial evidence, which is sometimes the more easy to get at, as the woman generally has recourse to the assistance of others to accomplish the crime, which is perpetrated without her concurrence. For this reason, by the laws of a neighbouring state, a severer punishment is visited on the accomplices than on the wretched mother; for the villain who lends himself to such a wicked purpose deserves a double punishment, as he is likely to commit a double crime of murder, both on the guilty and unfortunate mother, as well as on the innocent fruit of her womb; and this, without having the mother's excuse, that remnant of virtue which consists in shame, to plead as an apology for his twofold guilt.

Abortion is derived from the Latin *abortus; ab*, from; and *orior*, to be born; it signifies a miscarriage; and, in our medico-legal view of the subject, it is a miscarriage procured by art with a criminal intent.

If the fœtus or embryo is expelled before the end of the sixth week, the event is medically termed a *miscarriage;* but expelled or delivered between the sixth week and the end of the sixth month, it is medically termed an *abortion*, not the premature birth of a child. If delivered after that time, and much before the expiration of the nine calendar months, it is a *premature child.*

Quickening, as it is called, takes place about the sixteenth week; *before* that event, an attempt, "by administering to the mother poison or other noxious thing, or using any instrument or other means, with intent to procure the *miscarriage*," is only a misdemeanor, transportable for not more than fourteen years, or thirteen years' imprisonment.

But after quickening such attempt is punishable capitally.

By the law of Moses it is enacted, that where miscarriage takes place through violence, the judges shall regulate the degree of punishment according to the circumstances of the case; but should death ensue, then they are ordered to give "life for life."—*Exodus*, c. 4.

It would appear by the English law, that, as a woman cannot put in a plea in stay of execution unless the child has "quickened," so neither is the procuring abortion a crime previous to that indefinite period; because, according to our law, "life only begins as soon as the infant is able to stir in the mother's womb. For if a woman is quick with child, and, by a potion or otherwise, killeth it in her womb; or, if any one beat her, whereby the child dieth in her body, and she is delivered of a dead child, it is, according to the modern law, merely a heinous misdemeanor." "But if the child be born alive, and afterwards die in consequence of the potion or beating, it will be murder; and of course those who, with a wicked intent, administered the potion, or advised the woman to take it, will be accessories before the fact, and subject to the same punishment as the principal."—*Blackstone*, vol. i. p. 129.

The crime of procuring abortion seems to be involved in much doubt and uncertainty, from the imperfect wording of the statute. For where the woman is *quick* with child, in which case the offence is a capital felony, there is no mention of using *any instrument or other means whatever*, but the crime is confined to *administering* any *deadly poison*, or other noxious and destructive substance or thing; while in the clause against the minor offence, the use of *instruments or other means whatever* is expressly included.

We have before pointed out the absurdity of the distinction between quick or not quick, since the child must be either dead or alive. Here there is an additional absurdity, for the very means by which the crime is most frequently perpetrated does not constitute any part of the capital offence; and, therefore, the most probable mode of committing the crime appears to be protected by the most penal clause. Thus, in the case of William Pizzi and Anne Cheney, the man was tried for attempting to procure abortion, by giving her medicines which had no effect; and his having actually perpetrated the crime by mechanical violence was only brought forward as proving the intention with which the medicines were given."—*Fonblanque*, vol. iii. p. 91.

Miscarriage is frequently spontaneous, generally takes place about the third month, and often recurs at the same stated period during many successive pregnancies.

In the early months of pregnancy it is extremely difficult to ascertain whether or not miscarriage has taken place. In the more advanced stages of pregnancy the appearances are more or less the same as those after labour.

Before entering into the criminal history of abortion, it will be proper to make you acquainted with those causes which give rise to it in the course of nature, together with their *modus operandi*, or the mode of action by which they produce this effect. You will then be better enabled to judge of the physiological condition of the parts, and, sensible of the numerous difficulties with which it is surrounded, you will be the more cautious in forming your judgment, and avoid arriving at a premature or erroneous conclusion, when the life and reputation of a fellow-creature are at stake.

The causes of abortion are predisposing or constitutional, and exciting or accidental, and not unfrequently it takes place from a combination of both. But often the predisposition to abortion is so great, that it occurs without any exciting or accidental cause, and is then termed *spontaneous*. In some cases the most trifling accidental cause is sufficient to induce it, such as slight muscular exertion, an evanescent emotion of the mind, or even disagreeable odours, as the smell of a candle-snuff. In other cases the direct opposite is observed: thus Mauriceau makes mention of a woman in the seventh month of pregnancy, who, whilst escaping from a house on fire, attempted to slide down the sheets she had tied together; fear caused her to let go her hold, and she fell down from the third story upon the pavement. Her fore-arm was in consequence broken; but neither her excessive fear, nor yet such a severe fall, produced abortion.

The predisposing causes are sometimes peculiar to the mother, and sometimes to the fœtus. The first arise from a peculiar state of the uterus, or from that constitutional state of the mother which may communicate its influence either to the uterus or even to the product of conception. Amongst these causes may be classed the too great rigidity of the fibres of the uterus, so as not to admit of its dilatation; also the too great irritability or contractility of this organ; the debility and relaxation of the neck of the uterus; the atony of the uterus, whether idiopathic or symptomatic, as may arise from *fluor albus*, or from preceding difficult labours or abortions. These causes frequently induce abortions, which generally take place about the same period of pregnancy, and are hence termed *periodic*. Under this head may be ranged the chronic inflammation of the uterus, also cancer, carcinoma, fibrous tumours, polypi, uterine dropsy, the presence of several fœtuses, and consequently the too great dilatation of this organ.

Amongst the constitutional causes we must reckon such as take place in consequence of atmospheric changes, the only cause to which we can attribute those epidemic abortions which have been noticed from the days of Hippocrates downwards; a sanguine temperament; a plethora, and a predisposition to hæmorrhagia, frequently independent of plethora; also an abundant and irregular flow of the menses; great debility; excessive nervous sensibility, or morbid irritability; a cachectic state of the body; syphilis, scurvy, hysteria, and other chronic diseases; malconformation of the spine and pelvis; an hereditary predisposition; also that peculiar habit of body induced by previous miscarriages, although arising from causes purely accidental. Late hours, and want of sleep, the want of nourishment, tight clothing, especially such as press on the abdomen, as tight laced stays, also belong to the class of predisposing causes.

Those predisposing causes, which relate to the product of conception, depend either on the fœtus itself, or on the membranes or appendages belonging to it; these causes act either by occasioning the death of the fœtus, which thus becomes a foreign body, of which the uterus disembarrasses itself more or less speedily, or else by impeding its further growth, so that, no longer consuming a sufficient quantity of blood, a congestion takes place in the vessels of the uterus, from its redundancy, which either intercepts or retards the circulation. Hence we observe that abortion is frequently induced by such causes as the debility of the fœtus, its diseases, or its monstrous conformations; the feeble adherence of the placenta to the surface of the uterus, its insertion on the neck of this organ, its degenerating into a scirrhous, hydatic, aneurismatic, or varicose state; its atrophy, and its want of relative proportion to the size of the fœtus; the too great shortness, or the excessive length of the umbilical cord, especially when twisted round the neck or one of the limbs of the fœtus; its extreme tenuity; its withering away; its increase of volume from the presence of hydatids, or other tumours, knots or adhesions which impede the circulation; the tenuity of the membranes of the ovum; an accumulation of serous fluid between the chorion and the amnios; the too great deficiency, or the too great abundance, of the amniotic fluid.

The exciting or accidental causes are so extremely numerous, that it is in vain to attempt to enumerate them. In fact, there is scarcely any circumstance in life, however trivial, that has not given rise to abortion. I may mention, as causes, all acute diseases, as fevers, inflammations, and especially that of the uterus, diarrhœa, dysentery, colic, constipation, strangury, convulsions arising from hysteria, or from epilepsy; the passions of the mind, grief, rage, terror, and even excess of joy; violent pain; the impression of strong smells and odours; asphyxia; coitus; violent motion; straining and sudden jolts, such as happen in a carriage or on horseback, or whilst dancing; also the effects of violent laughing, loud cries, coughing, and vomiting; falls, blows on the loins or the abdomen; the use of drastic purgatives, emmenagogues, pediluvia, large bleedings, especially in the feet; convulsive motions of the fœtus; rupture of the umbilical cord, also of the membranes. All these are

mentioned by the best authors on midwifery as causes of abortion.

It is generally supposed that the greater part of the accidental causes operate by producing a partial separation of the placenta, a greater degree of impetus or motion being communicated to it, in consequence of a sudden fall or jerk, than to the uterus itself; whenever this takes place, uterine hæmorrhage must be the immediate result of such a cause. A jerk or compression of the uterus may also produce the immediate rupture of the umbilical cord, or of the membranes of the ovum. These accidental causes more frequently produce a congestion, which is shortly followed by hæmorrhagia; and hence the separation of the placenta, which gives rise to the contractions of the uterus by the disturbance or disorder it creates in the exercise of its functions. It has further been remarked that abortion takes place more readily from such causes about the corresponding periods of menstruation than at any other epoch. Some of these causes act by exciting spasmodic contractions of the fibres, which are communicated by sympathy to the uterus. Others again direct their influence immediately on the fœtus; thus frequently violent affections of the mind are said to be immediately followed by convulsive motions of the fœtus, ending in its death.

Having now entered pretty fully into the history of abortion arising from natural causes, we will consider it in a criminal point of view; we will endeavour to distinguish whether it has been procured by art with a criminal motive, or induced by any of the causes enumerated.

We have the testimony of Benjamin Bell and Dr. Rush, that "mercury may be given in sufficient quantities at every period of pregnancy for curing every symptom of syphilis, without doing the least injury either to the mother or the child. Dr. J. Bech relates the case of a female, who was eight months gone with child, and attacked with a violent inflammation of the lungs. After the usual depleting medicines it was found advisable to have recourse to mercury. She was accordingly put upon the use of small doses of calomel and James's powder. In a few days salivation came on, after which all the symptoms of her pulmonary complaint speedily vanished, and the patient was restored to her usual health. She was afterwards delivered of a living child at the full period."—*Bech*, p. 147.

The means employed to procure abortion are of two kinds, viz. such as are direct, and such as are indirect; under the first may be classed all such causes as tend to diminish the nourishment of the fœtus, and thus produce starvation or inanition; such as bleeding and purgatives, those of a drastic nature also act by sympathy, increasing the vermicular action of the intestines to a violent degree, and excite the contractility of the uterus. Under the second head may be classed all those causes which have a tendency to interrupt the communication between the fœtus and the mother, as violent mechanical means, as dancing, emetics, sternutatories, and such like, also such as produce a determination of blood towards the uterus, or neighbouring parts. But nature generally interposes her salutary resistance to even the most energetic of these deleterious expedients, and, careful to perpetuate the species, casts the Ægis of her protection over the fœtus, and renders them innocuous to the offspring, except at the price of the life of the guilty mother, or at the permanent loss of her health.

The means usually employed with a criminal intent, are bleeding, especially in the feet, leeches applied to the vulva, the hip-bath very hot, drastic purgatives and emmenagogues, stimulating diuretics, as rue or savin, also cantharides and many other remedies, to which vulgar belief has attached much efficacy. Fortunately few or none of these means have the power of producing miscarriage.

The use of these means to procure abortion must, in influencing our judgment, depend much on circumstantial evidence, since they may be used as remedial for other diseases, and, notwithstanding the popular belief to the contrary, seldom induce abortion. Mauriceau mentions that a pregnant woman was bled ten times in the foot without causing abortion; and another, where miscarriage did not take place, notwithstanding many copious bleedings both of the arm and the foot, and the frequent repetition of emetics, which were prescribed in a case of apoplexy. Drastic purgatives, administered, or taken, with the criminal intent of procuring abortion, have been known to cause severe hypercatharsis, peritonitis, enteritis, convulsions, and frequently death, without causing the expulsion of the fœtus. Those emmenagogues and other drugs, calculated to produce either congestion in the vessels of the uterus or to excite the contractions of the fibres of this organ, are all of them extremely acrid, and their employment frequently occasions inflammation of the uterus, or of the ovaries and other viscera, leaving behind a train of symptoms, which, whether they have procured abortion or not, are sure to entail on the wretched and guilty mother a painful and miserable existence.

The Juniperus Sabina, or savin, has, in popular belief, obtained a reputation for its qualities in expelling the fruit of the womb. This plant is a poison, which, on distillation, yields an essential oil, possessing all the qualities of the plant in a concentrated state. Foderé relates the case of a poor, cachectic, imbecile girl. In the seventh month of pregnancy she took a cupful of wine, in which her seducer had mixed a large dose of savin. She became so ill, that a report was made to the magistrate, who ordered Foderé to visit her. The patient stated to him, that, on taking the drug, she had felt a burning heat, accompanied with hiccough and vomiting. This was

followed by a violent fever which continued for fifteen days. By the use of proper refrigerant remedies the girl recovered, and, at the end of two months, was safely delivered of a healthy child.—*Foderé*, v. iv. p. 431.

Dr. Christison relates another case, where a female applied to a pedlar to supply her with the means of getting rid of her pregnancy; and, under his direction, appears to have taken a large quantity of a strong infusion of savin leaves on a Friday morning, and again next morning. A very imperfect account was procured of the symptoms, as no medical man witnessed them; but it was ascertained that she had violent pains in the belly, and distressing strangury. On the Sunday afternoon she miscarried, and on the ensuing Thursday she died. The body was examined on the next day; there was found extensive peritoneal inflammation; the uterus had all the signs of recent delivery; the inside of the stomach was of a red tint, chequered with patches of florid extravasation, and its contents of a greenish colour, owing to the presence of a vegetable powder, as was proved by separating and examining it with a microscope.

It does not appear that either savin, spurred rye, or any other drug, exercises a specific action on the uterus, so as to induce premature labour, but that in such cases abortion is merely a secondary effect of the shock given to the system, from the exhibition of powerful medicines in large doses.

Foderé relates a case, of which he was an eye-witness. A cook-maid finding herself pregnant, and being no longer able to conceal it, procured half an ounce of powdered cantharides, which she mixed with an ounce of sulphate of magnesia, and swallowed them, in order to produce abortion. Some hours after she was seized with violent colic, and, in the most horrible pain, brought forth a living child about the sixth month, nothing could afford her relief, and she died the same night.

In the case of Mrs. Robert Turner, one of the persons poisoned by Eliza Fenning, notwithstanding the long and violent sufferings she had experienced during her pregnancy, she brought forth a living child at the natural period.

In consequence of the uncertainty of drugs, recourse was had at a very early period to more violent mechanical means, especially such as the dilatation of the os uteri, or the introduction of a bodkin or some pointed instrument, by which the fœtus was destroyed. When such means have been employed, we may discover their marks, either on the fœtus, or on the membranes, or on the organs of generation of the female.

At Durham Assizes, in 1781, Margaret Tinchler was indicted for the murder of Janet Parkinson, by inserting wooden skewers into her womb, for the purpose of producing abortion. It appeared on dissection that there were two holes in a gangrenous condition, which these extraneous bodies had occasioned, and to which the deceased had fallen a victim.

On the trial of Charles Angus for the murder of Miss Burns, allusion is made to an instrument, described as *a silver tube with a slide, at the end of which was a dart with three points*. Guy Petin makes mention of a midwife who was hanged at Paris for occasioning the death of a lady by an attempt to procure abortion by this method. On her trial, she said she had frequently practised it with success; but, in this case, the instrument had pierced the body of the uterus instead of passing through the os tincæ.

Foderé, in speaking of this instrument, expresses himself with the warmth of honest indignation. "I have heard," says he, "of those who have made use of this infernal machine to procure abortion, but they have been reduced to the very verge of the tomb, and have never recovered their former health. Thus the crime, in some measure, does not remain unpunished, whatever may be the means employed to commit it; and thus those monsters who prostitute their knowledge and their services to commit so deep a crime, are doubly assassins, and therefore deserve a double punishment."

Blows on the abdomen and loins are not an unfrequent cause of abortion; yet, even when such is the case, it is for judicial consideration, whether they have been sufficiently severe to be the sole cause, whether there might not have been a predisposition, or some imprudence, or a want of proper precaution on the part of the female. We should then enquire whether such blows were inflicted with a criminal intent, or whether the woman had provoked the blows, and also whether the accused knew of her pregnancy. Two cases given by Bellor very fully illustrate these questions. A young woman, between the third and fourth month of pregnancy, had received several kicks and blows with a fist. Immediately after this brutal treatment she was put to bed, bled, and took various remedies given her by a surgeon. The hæmorrhage, however, continued, with pains in the loins and abdomen, and on the next day she had an abortion. Bellor, on being examined, declared that the accident was owing to the kicks and bruises she had received. In the other case, a female brought forth a dead fœtus, about the fourth month, two days after a quarrel with her husband, in which he said he had struck her. Instead, however, of lying down, or at least keeping quiet, she walked a league that day, and on the next a quarter of a league, to a place where she was to assist in bringing in the harvest; nor was it until her arrival there that she was forced to go to bed. In this case Bellor decides, that it is very possible had she remained quiet and called for proper assistance, the abortion would not have occurred, particularly as the violence used was only that of throwing her down in the street. Dr. Gordon Smith makes mention of a man

who was executed at Stafford, in 1811, for the murder of his wife. She was in the pregnant state, and he had attempted to induce abortion in the most violent manner, by elbowing her in bed, rolling over her, and other violent means, in which he succeeded, not only in procuring abortion, but, along with it, the death of the unfortunate woman.—(G. Smith, 325.)

Orfila, amongst his Reports, gives the following case of abortion, which may be useful in directing your attention when called on to make investigations of this nature. A young woman, aged 17, had been delivered the preceding evening of a male child of about six months. She positively asserted that she had avoided every cause calculated to produce a miscarriage, as bleeding, leeches, hot baths, violent exercise, irritating substances, emetics, drastic purgatives, &c. On examining the room, we found in a cupboard two packets containing a mixture of rue and savin, at which she appeared perfectly surprised, and assured me she had never made use of any such medicines. We then proceeded to examine her person, which presented all the marks of recent delivery. On the interior surface of the labia there were about a dozen triangular bites in a state of ecchymosis, proving beyond doubt that an equal number of leeches had been recently applied. In addition to this, there were slight marks of the lancet from recent bleedings in the leg and arm. In other respects the girl suffered the most excruciating torments in the hypogastric region; the skin was parched and burning hot, and the pulse extremely frequent. The body appeared that of an infant of about six months. We remarked in that portion of the skin of the cranium which corresponded with the middle of the sagittal suture, an opening about the third of a line in width, which was ecchymosed all round. In carefully dissecting the wounded parts, it was easy to trace the wound through the membranous commissure which united the parietal bones and the dura mater into the brain. The superior longitudinal sinus was open, and a large quantity of blood, principally in a liquid state, was effused on the surface of the brain and between the two hemispheres. In other respects the cerebrum, cerebellum, and medulla spinalis had not suffered any injury; the thorax was flat; the lungs of a small volume, of a red colour, and did not crepitate on pressure, and sunk readily to the bottom of the water, whether put in whole or cut into pieces. The diaphragm was drawn upwards towards the thorax, and the abdominal viscera appeared in a natural state. The placenta had been removed.

From the above facts, Orfila deduces the following conclusions:—1st, that the young woman had been lately brought to bed; 2ndly, that the fœtus, about six months old and well formed, was still-born; 3rdly, that there was every reason to believe that it would have lived had it continued to be developed; 4thly, that it had been wounded in the sagittal suture by a pointed instrument, which had penetrated sufficiently into the interior of the cranium to lay open the superior longitudinal sinus; 5thly, that this wound had been made during the lifetime of the infant; 6thly, that to this cause the death of the infant must be attributed; 7thly, it is extremely probable that this girl, whose assertions were evidently false, had pierced, or caused to be pierced, the cranium of the child whilst *in utero*, after having in vain endeavoured to procure abortion by means of savin, rue, and blood-lettings; 8thly, it would have been possible to establish this fact had the membranes not been removed, and to have ascertained whether they had been injured at the part corresponding to the saggital suture.

I shall now lay down a few simple rules for your guidance when called upon to deliver your opinion on a case of suspected abortion. In the first place, it is necessary to examine whether the substance expelled from the uterus is really a fœtus or some other body, as a mole or hydatids; and, if a fœtus, to ascertain what may be its probable age. Then to examine if the body has any mark of violence; this is especially necessary should it be suspected abortion has been procured by mechanical means, as, for example, by the introduction of any sharp pointed body into the uterus. We should then endeavour to find out the probable length of time the fœtus may have been dead previous to its expulsion; this may be learnt from the changes it has undergone, as the sinking of the fontanelles without any marks of external violence, the peeling off of the epidermis in different places, the livid colour of the skin, the withering and want of tenacity in the umbilical cord, the greater or less degree of swelling of the whole body, and, above all, by the putrid smell. The body should be carefully washed, or rather immersed, in a large vessel of water, which in a short time will separate any clots of blood that may be adhering to it; should this not be sufficient, they may be detached by directing a stream of water upon them from a small syringe.

In respect to the woman it is necessary to ascertain whether she exhibits any traces of abortion, and to inquire into the circumstances which have preceded the event. Whether she has been exposed to any of those accidental causes which might give rise to it, or whether there has been any criminal intention on her part to destroy the life of the offspring; or whether it has been had recourse to with a view to save the life of the mother in consequence of some mal-conformation of the parts. If she has concealed her pregnancy, if she has endeavoured to acquire any knowledge of those means by which abortion might be procured, or if she has made any preparations or arrangements for her accouchement.

Should the death of the mother take place

in consequence of the abortion, the body ought to be most carefully examined, especially the uterus, and any marks of violence which may be observed ought at the time to be noted down. These should be compared with any corresponding marks on the fœtus or lesion of the membranes. These investigations, if judiciously conducted, would greatly aid the ends of justice, and might discover the real authors or accomplices of the crime, should any such exist.

I shall conclude this lecture by quoting the observation of Dr. W. Hunter.

It was the opinion of this celebrated man, "that the crime of procuring abortion is not of such frequent occurrence as many suppose. The wish to preserve her character naturally induces a woman to conceal her situation; and not being certain how far her pregnancy has advanced, she may be seized with pains, which she mistakes for griping in the bowels (which the first pains of labour sometimes greatly resemble), and, going to the privy, be there delivered; the child may be still-born, or it may be killed by falling on the ground, or die from hæmorrhage, or be drowned in the profuse discharge of the mother, who, from fear, pain, or insensibility, is unable to assist it. In such a case it would answer no purpose that the woman should divulge her secret; she would naturally endeavour to preserve her character, and hide every appearance of what had happened as well as she could; yet, if discovery should be made, the circumstance of concealment would be set down as a proof of her guilt." We ought, therefore, to be deliberate in forming our judgment, and never suffer that judgment to be warped by popular clamour, or yet to be too hastily formed by the *primâ facie* appearance of the case.

REMARKS ON ENDERMIC MEDICATION.

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Read before the Medico-Botanical Society, Nov. 11, 1834.

It is usual at the commencement of each session of this Society for one of its officers to lay before you a short sketch of the internal arrangements and economy of this Institution, but I do not intend to follow this plan to-night, I shall content myself with stating that the affairs are in a most flourishing condition, and that when I was in Germany, I saw the noble President (Earl Stanhope) who continues to take the most lively interest in its well being. I shall, in preference, direct your attention to such improvements as have been made in the healing art during the recess, and point out such paths as may, with greatest advantage, be followed in the prosecution of the great object we have in view, the advancement of medical science. In pursuance of this plan, I have ventured to offer to your consideration a subject of very deep importance, which, although it has not entirely escaped the attention of the enlightened men who cultivate and adorn our profession, has not, as yet, obtained for itself that system of inquiry and experiment which it deserves, and which, amongst our continental brethren, has justly been bestowed upon it. It is true that our periodical publications contain occasional papers and remarks on the subject, but there exists no proof that much consideration has yet been given to the introduction of medicine into the system through the medium of the skin, and producing general effects through the external surface.

The continental medical men have considered cutaneous absorption, or imbibition, under two heads; to the first, which consists in the simple rubbing in through the skin of medicinal substances, they have applied the term iatraleptic medicine; to the second they have given the name of endermic, and this consists in the removal of the epidermis, by such means as will not produce any structural change in the subjacent tissue, and then the introduction of a remedial agent through the denuded surface; these two systems of cutaneous medication have been carried to a very great extent.

Previous to the consideration of these two methods, let me recal to your recollection the nature of the epidermis, or scarf-skin, and the relation it holds with regard to the rest of the system. We find that the whole surface of the skin is covered by a dry, scaly, transparent membrane, thin in most parts, but in others, where considerable pressure is exerted, thick, hard, and callous. The greater proportion of organised bodies is supplied with this superficial covering, which protects the subjacent tissues from the action of external agents; it is this that prevents the admission of all substances to the parts beneath, and that, under ordinary circumstances, enables us to come into contact with all bodies by which we are surrounded, and, in most instances, to resist the absorption of poisonous matter. When destroyed, as is the case in burning, blistering,

after various diseases, such as scarlet fever, by the action of cold air, or by the direct rays of the sun, it is reproduced with wonderful rapidity, which appears an indication of the important function it has to perform. How it is formed we are, as yet, unable to judge, for neither vessels nor nerves are discernible; the most minute examination of its structure has only exhibited to us that there are innumerable quantities of lamellæ or scales, which lie one upon the other, in much the same manner as do the tiles on the roof of a house. This covering of the body resists putrefaction in a most extraordinary degree, and even after the greater part of the mortal frame has mouldered into dust, it has been found unchanged, and the part of the body to which it belonged may be ascertained.

Leuwenhoeck asserts that there are an immense number of small perforations, the terminations of exhalant vessels; this Blumenbach denies. M. Chevalier, employing a lens magnifying 140 times, could not discover any except where hairs grew, or in the situation of the sebaceous glands, but the velamina, or scales he observed, which seemed to transmit a fluid, as through bibulous paper; he describes them as of great tenuity, of a follicular appearance, separated from each other by rather thicker bands. It is from these that the excrementitious particles which have neither been taken up by the kidneys, nor carried off by the intestinal canal, and which would stimulate the blood too much are carried off. That which they throw out is in the form of an insensible perspiration, but when increased in quantity it is called the sweat. These pores, as they have been called, are most evident upon the palms of the hands, the soles of the feet, the nose, behind the ears, and on the external parts of generation. These vessels distributed over the whole surface of the body, have a most powerful sympathy and action upon the mucous membrane that lines the whole cavity of the great intestinal canal from one end to the other. The easiest experiments will prove that those pores are perpetually exhaling an insensible perspiration; a dry, clean polished surface, such, for instance, as a mirror held near the naked body, will, especially in warm weather, be quickly sullied. A glassful of cold water held near the naked arm will have its surface dimmed by the vapours which exhale becoming condensed by the coldness of the exterior surface of the glass. If the arm be placed within a long glass tube, not only will the external surface become sullied, but, if the limb be retained there for a sufficient length of time, streaks of moisture will be seen trickling down its sides.

This perspiration is brought by minute arterial tubes to the surface of the skin, and, as long as the pores are open, it escapes, but when these minute pores, which, as I have observed, are scarcely visible by the aid of the most powerful microscope, are closed, various vesicles are raised. This may be illustrated by the fact that warm water injected into the artery of the dead subject will reach the external surface of the skin, but being stopped by the epidermis, the exhalants of which are close after death, it will raise it into small vesicles.

Beneath this lies the true skin, made up of a close cellular texture, into which myriads of capillary tubes, both venous and arterial, enter. They form a vascular net-work over the whole surface of the cutis vera; their numbers defy all calculation. These vessels become rapidly injected with blood, as is seen in the blush, in the glow of excitement, after coming out of the cold-bath, after exercise, in various febrile affections, and in the different exanthemata or rashes. It is by means of these vessels that external medicine is conveyed or carried into the system. The cutis vera is endowed with the most exquisite sensation; there are an immense number of papillæ, the extremities of nerves, these are more distinct in the fingers and lips than elsewhere, and hence the sense of touch is quicker and more distinct in these parts. The perspirable matter, constantly gliding over these minute papillæ, keeps them in a constant state of moisture, and enables them to preserve the delicacy of their function, whilst the insensible epidermis, being interposed between the object touched and the true skin, prevents too acute sensation, which occurs when it is rubbed off.

In a lecture delivered by Magendie, and published in the *Lancet*, we find that he performed an experiment before the whole of his class, demonstrating that as long as the epidermis is in a sound and healthy state, cutaneous absorption does not take place, unless

friction be employed. He placed with the glass tube a few drops of prussic acid on the integuments of a rabbit, and the poison did not produce any appreciable effect. This is at variance with the experiments of others. M. Emmett tells us, that he found the essential oil of bitter almonds, applied to the uninjured skin of a rabbit, produce the usual symptoms, and death; and, he adds, that the peculiar odour of the poison was very perceptible in the deep-seated muscles of the back. The absorption of lead, in whatever form it comes into contact with the skin, will produce colic, or the paralysing effects which it causes when taken internally, without any apparent action upon, or destruction of, the epidermis. Arsenic when applied to the skin of the human subject, may produce all the ordinary symptoms which attend its internal administration, and, indeed, it will act with equal violence and rapidity; the stomach will exhibit the same signs of inflammation. Mercury will also cause its peculiar effects when applied to the skin. Corrosive sublimate has been known to excite, through the sound skin, an action as violent as through the alimentary canal; salivation, and even death, have been known to follow its application. Vapours can be transmitted through the skin; and Magendie lately demonstrated the fact to his class. He enclosed a rabbit in a large glass, the head remaining outside; the vapour of the concentrated acid was introduced into the glass, and the effects were manifest in about two minutes and a half; it died as quickly as if the poison had been placed on the skin or tongue. This led to an idea, that a portion may have escaped from the bottle, and been introduced into the system by the lungs.

M. Nysten found that tetanus and death were the result of leaving sulphuretted hydrogen gas for some time in contact with the skin; and Buchner on one occasion remarked, that, whilst preparing cyanogen gas, the forefinger, which was exposed to the bubbles as they escaped, became suddenly benumbed, and that this effect was attended with a singular feeling of pressure and contraction in the joints of the thumb and elbow. We must, at any rate, all feel convinced, that substances, if in contact for any length of time with the epidermis, and more especially when aided either by animal or artificial heat, will be imbibed or absorbed. Some of them may act by mechanical destruction of the epidermis, or by some alteration in its structure. There are, besides, certain diseased states of the skin, in which absorption takes place very rapidly; thus, an infusion of tobacco applied to the head for the cure of tinea capitis has been known to produce all the bad effects which have resulted from the injudicious administration of tobacco.

Few medicines have been more fairly tried as an iatraleptic, in France, than digitalis in the cure of dropsy, and it has answered the most sanguine expectations that had been formed of its success. Dr. Chrestien, to whom we are most indebted for his experiments, has given us a fair narration of the cases which were successfully treated, and those in which it has failed. He is borne out in his practice by M. Cros Rogery, de St. Geniez, by Bernard de Beziers, by Blavet de Montbozin, by Rouchy de Montpelier, and Archbold Aspold. Under M. Rogery's treatment by the friction with digitalis, a case of dropsy of the abdomen, which followed upon a repelled eruption, was cured; under Dr. Chrestien, dropsy, the sequela of scarlatina, in a boy of five years of age, disappeared; and dropsies consequent on visceral inflammation, and on splenitis after intermittent fever, have yielded to friction upon the hypogastrium with tincture of digitalis, three times in the course of the day. The tincture is prepared by macerating for a quarter of an hour an ounce of the leaves in three of alcohol. The method employed by Brera, which was the first introduced, and was therefore somewhat rude, consisted in macerating the digitalis in saliva, and then applying it by friction to the abdomen. In the only cases (two in number) in which I have had an opportunity of seeing it employed, I cannot say that I have seen any permanent benefit; but they have not been cases in which a favourable result could be fairly expected, as they have been desperate cases, in which all other remedies had failed. In one of these, which I have reason to believe is caused by an aneurism of the cœliac artery, and where the effusion is most rapid after the operation of paracentesis, the kidneys have lost almost all power of secretion; but, during the first two days of friction with the tincture of digitalis, prepared according to Dr. Chrestien's formula, they

were evidently stimulated into some action, but soon returned to their previous torpid state.

The atropa belladonna has been tried as an iatraleptic, by Dr. Gouvion and M. Carre, in the most painful cases of neuralgia; and in rheumatism it has been found eminently successful, when its extract has been rubbed upon the abdomen, upon the sternum, or the dorsal vertebræ. In cases where, during labour, spasmodic contraction of the neck of the uterus has resisted the use of the lancet, Mad. la Chapelle says that the extract of belladonna, assisted by warm baths and emollient fomentations, rubbed upon the region of the uterus, have answered the most sanguine wishes of the accoucheur. In the reduction of hernia it has likewise been of great and important service; and also in retention of urine occasioned by muscular spasms about the neck of the bladder. M. Chevalier has published some interesting cases of spasmodic stricture cured by a bougie, on which belladonna was put. Castor oil rubbed over the abdomen produces the same effect as if taken internally, and more especially if aided by the use of the warm bath. Obstinate constipation has yielded to this remedy; and where such violent and constant sickness has been present as to preclude the possibility of the internal administration of the oil, it has produced all its good effects, without adding to the distressing state in which the stomach is found. I have seen by these means an action produced upon the bowels within a quarter of an hour after the friction had been employed, immediately on the patient leaving a bath of the temperature of 98°, where calomel, jalap, neutral salts, and lavements, had failed to relieve the intestinal canal, and where constant vomiting had commenced, and all idea of internal remedies had necessarily been abandoned. Croton oil likewise produces a complete relief of the contents of the bowels, when employed in a similar manner, and more particularly when combined with castor oil, as its general effects, when employed alone externally, are the production of a number of small red pimples, which become pustules resembling those of the small-pox, or those which are produced by tartar emetics; and experiments have been made upon upwards of thirty patients, which prove its efficacy as a counter-irritant. If four or five drops are applied by friction to the abdomen, combined with an ounce of oil of sweet almonds, at the end of from thirty to fifty hours the pustules are developed, which continue to increase for four or five days, and then dry up, or the skin becomes covered with scabs, which desquamate slowly. That similar effects are produced by tartarised antimony, said to have been introduced by Jenner, others by Hanway, and others by Autenrieth, formed into an ointment, is so well known and so generally employed, with the greatest success, in this country, that it is quite unnecessary to dwell upon it.

Camphor has been very highly recommended as an external application by M. Malgaigne. He has, in several cases of erysipelas, used the powder of camphor with the greatest success. He has also tried it with some success in cerebral affections; he advises it to be employed with some moisture, so as to produce, by evaporation, a long continued and intense cold, and in this way it supplies the place of ice; in this form he has also used it in peritonitis, in which it alleviated the heat which is so much complained of. In hæmorrhages he has also found its employment of the greatest value; he considers it to act as the volatile oils, or as ether by evaporation, and thinks it the most certain and most powerful of refrigerants. A case has lately appeared in one of the French journals, in which it cured a case of dumbness, consequent on paralysis, when applied by friction upon the upper part of the skull-cap. The powers of veratria have been lately the subject of examination in this country, and an essay has been published on its merits.

The chloride of gold and sodium have been successfully employed by Chrestien and by Puche, both as antisyphilitics and as antimercurials.

Iodine has fully borne out the expectations that had been formed of its power to discuss anomalous tumours, and glandular enlargements. The deuto-ioduret of mercury has been used in a mild form, 15 grs. to ℥ij. of lard, and xx. drops of essence of bergamot, by M. Biett, in various cutaneous eruptions, but in glandular enlargements he has applied a more caustic preparation, namely a drachm to an ℥j. of oil of almonds, this is partly absorbed and partly desiccated. M. Maury has seen two

cases of a sudden salivation come on two hours after its application. On the third or fourth employment of this remedy to indolent scrofulous swellings, pain and inflammation are produced, and absorption and diminution of the engorgements become perceptible. In some instances this is accompanied by fever, colic, and diarrhœa, but these seldom prove in any way alarming. The deuto ioduret of mercury has been found serviceable in similar cases. The cyanuret of potash has relieved the pain in neuralgia, and proved an effectual remedy. Dr. Short has had occasion to speak in most favourable terms of the marchantia hemispherica employed as a poultice in the cure of dropsy. Opium and its constituent morphine have been successfully employed for the relief of various painful disorders.

An instance, in which its external application proved injurious, as recorded by Dr. Chrestien, translated from the *Journal de Chimie Médicale*, vol. vii:—A child, two months old, very nearly perished in consequence of a cerate, containing 15 drops of laudanum, having been kept for 24 hours on a slight excoriation, produced by a fold of the skin. When the cause of the illness was discovered, it had been for some hours almost completely insensible, with a slow obscure pulse, and occasional convulsions. It also appears from the following instance, that, in certain diseased states of the integuments, it may prove fatal. A soldier, affected with erysipelas of the leg, had a linseed poultice applied, which his surgeon ordered to be sprinkled with 15 drops of laudanum; next morning the patient was found in a state of deep sopor, and affected with convulsive twitches of the muscles of the face and limbs, and in no long time he expired. His soporose state turned the surgeon's attention to the poultice, which he found coloured yellow and smelling strongly of opium, and, on removing it, found that it was completely soaked with laudanum, which the attendant had carelessly poured on it to the extent of an ounce. The patient died notwithstanding all the remedies which his state called for; and the viscera were found quite healthy, but in many places the blood had a strong odour of opium.

Endermic medicine consists in the removal of the epidermis by such means as cannot produce any structural change in the subjacent tissue, and then the application of a remedial agent to the surface thus denuded. Various are the modes which have been employed to expose the part on which remedies are to act; the most common practice is to apply a blister of cantharides; others prefer liquid ammonia. Boiling water has been tried, but it changes the natural structure of the skin; phosphorus has a similar effect: various other vesications have been employed, but they have been generally found to produce some irritation of the exposed surface, by which means the transmission of blood through the capillary vessels has been impeded, and thus the expected influence has been lost; the epidermis should be cut with a pair of scissors, and beneath it is to be introduced the remedial agent: if it is an insoluble substance it is to be sprinkled on the exposed surface; if it is a fluid it may be applied by moistening a small piece of lint with it. The seton is another mode by which it may be introduced, but great care and caution are requisite. Magendie gives us an instance of its bad effects in an old curé, who was poisoned in this manner by the introduction of a morsel of strychnine into a seton. The effects, in many instances, are exhibited in a very brief space of time, and the rapidity with which they are absorbed is such as to demand the greatest attention, more particularly as very minute doses will operate very readily, so much so, that very serious results have followed the application of arsenic and other remedies to denuded surfaces.

The French adopt the following plan:—Where an instantaneous blister is necessary, cut a piece of cotton, of linen, or of paper, of the size and shape for which it may be required; immerse this in spirits of wine, in strong brandy, or in eau de Cologne, lay it on the surface to be blistered, wiping the edges, so that none of the fluid may moisten the surrounding parts; apply a lighted candle rapidly over the whole surface, that it may all be burnt immediately. The ignition is exceedingly quick, and the cuticle will be found separable from the subjacent cutis.

Quinine, as an endermic remedy, has been tried with great success in the cure of intermittent fever. M. Martin published, in the *Archives Generales*, an essay on this subject. He found that thus introduced into the system, even in very small quantities, it

arrested the progress of the disease. M. Lambert next tried it, and succeeded, and the practice has now become general. If a blister be applied to one of the lower extremities, and when the skin be sufficiently raised a very small quantity of the sulphate of quinine be applied, in about ten minutes a sensation of gentle heat will be perceived in the limb, ascending to the back, and gradually diffused over the whole system. The hot fit comes on before its usual period, and the whole of the paroxysm is shortened. Even the introduction of ten grains has been found sufficient to arrest the progress of an ague. Care must be taken to reduce the quinine to a very fine powder, and to incorporate it with simple cerate, or some greasy matter, for without this a high degree of irritation will be produced. Dr. Stokes tells us, that one of the most severe and troublesome forms of ulceration he had witnessed for a long time, occurred in a case in which quinine had been applied to a blistered surface. Over the whole extent of skin to which it had been applied numerous ulcerations took place, which resisted, for the space of six weeks, every attempt to heal them. It appears that quinine is one of the most valuable of the endermic remedies, for it can be introduced where gastric irritation prevents its internal administration; it acts more quickly than through the stomach, and small quantities only are required.

Some of the narcotic medicines have been employed most beneficially in the endermic way. M. Lesieur, who published a treatise upon the "Nouvelle Medication par la voie de la Peau," relates seventeen cases in which he tried the acetate of morphine at the Hospital Cochin and the Bicêtre; of these four were chronic catarrhal affections which were quickly relieved, and soon cured by the application of acetate of morphine to a blistered surface; half a grain, gradually increased to two grains, was introduced; this was continued for a month, and whenever the treatment was intermitted the symptoms returned. Two cases of phthisis pulmonalis were relieved, but the dose was necessarily smaller. Pleurodynia, which resisted leeches, blisters, and other remedies, was thus relieved; a neuralgic affection of the temple was cured by the same means. A very interesting case occurred at La Pitié, in February, 1826, the details of which are to be found in the July number of the *Medico-Chirurgical Review*, condensed from the *Archives Generales de Médecine*. It was one of those gastralgic affections, which similate gastritis of a chronic kind, attended with perpetual vomiting, and in which no internal remedy could be employed. M. Lambert applied gr. ss. of acetate of morphine to the blistered surface; in a few minutes the vomiting ceased, as if by magic, and the patient passed a better night than she had done for some time. The next day the process was repeated, and the patient slept the whole of the day; the acetate of morphine was gradually increased, until at length food was retained, and a cure effected. M. Bally, in the Memoires de l'Academie Royale de la Médecine, details its effects on rheumatisms, lumbago, and sciatica, and he states that three cases of tetanus were treated by it with success; one was traumatic, the second produced by strychnine, and the third by fright.

M. Magistel has made public the happy result of his employment of acetate of morphia in hemicrania. Dr. Stokes, of Dublin, has been successful in two cases of intermittent hemicrania, which soon yielded to this treatment.

M. Bally has employed strychnine in this manner with considerable success. Of two men affected with paralysis of the hands, one was evidently cured by the application of a grain to a grain and a half of strychnine daily to the raw surface produced by a blister; the second recovered the use of one hand, and nearly recovered that of the other, and a third paraplegic patient was able to walk. M. Lesieur has applied powdered strychnine, one-sixth of a grain, to the blistered surface for hemiplegia; when the quantity was increased to two grains, a paroxysm of tetanus supervened, which was dissipated by the substitution of acetate of morphine for the strychnine.

Mr. Foote tells me that he has had, at the Royal Westminster Ophthalmic Hospital, an opportunity of seeing amaurosis treated by strychnine endermically employed; a small blister was applied to the temple, and the epidermis removed, after which a quarter of a grain of the alkali was sprinkled on the

sore; the dose was gradually raised to a grain: during its exhibition some of the peculiar symptoms attendant on strychnine became evident, namely, spasmodic twitchings, &c. In one or two cases it appeared to do good; vision certainly improved, but it was not pursued far enough to effect a cure; of course the danger attendant upon the employment of larger doses would naturally prevent the full use of this active substance, more particularly when the fact of the death of Majendie's curè by a morsel of strychnine endermically introduced is so well-known. Very few purgatives have as yet been tried according to this method, but it has been found that tincture of aloes, applied to a denuded surface, will act upon the bowels quite as copiously as if taken internally, and many of this class of medicines act with a rapidity quite equal to that celerity with which the bowels act. It has been known that ʒij. of colocynth, or bitter apple, applied to the wound of a dog, has destroyed it with great rapidity. The necessity for the administration of endermic purgatives has not yet arisen, and therefore they have been less employed than the narcotics, from which so much benefit has been derived. Musk, belladonna, datura stramonium, hyoscyamus, have been all applied in neuralgia, and with evident success, and the names of Bloquiet, Piorry, and Trousseau, are sufficient testimonies of the truth of the power of these remedies.

The advantages that result from the endermic mode of treatment of disease, will be found in many cases so important, that we may expect great results from it; yet again there will be very many instances in which it will prove unsuccessful; where diseased skin exists, where there is a languor in the capillary circulation, where there is a determination to the external tissues of the body, where sudorifics have been much employed, or where the kidneys have much influence upon the system, we can expect to derive little or no advantage from it. Where, on the other hand, the stomach and intestinal canal suffer from inflammatory action, or where the nervous influence has been suspended by the action of narcotic substances, where gastro-enteric irritation exists, we may, according to the nature of the disease, the habits of the individuals, and the properties of the medicinal agent we wish to introduce, find that we have gained an important mode of action upon the human body, which will serve at any rate as an auxiliary, and sometimes as a resource when we have already exhausted all the means which long experience has placed in our hands. Like every other discovery, it will be a long time before it arrives at perfection; many failures will necessarily happen, but by directing steady and careful observations to all the phenomena that may present themselves, we shall at last attain the great object of our research, —the power to do good. It is incumbent on the medical man to scrutinise with anxious care every new plan that may be proposed for the alleviation of disease or for the prolongation of life; although many may be offered, which, upon strict examination and cautious experiments, are found little adapted for the great objects he has in view, he must always bear in mind that from unsuccessful researches he attains the great end of knowledge,—truth; and that although he may be baffled in the object of his inquiry, yet that every fresh step he takes advances the progress of science. In inquiry into a new mode by which medicine may be introduced into the system, we must be well aware that at the first onset many discrepancies may be visible, many mistakes may be made, and many difficulties will present themselves, which can only be surmounted by reasoning founded upon experiments. We are not to expect that the new system will be found superior to the others that have already gained general estimation from their excellence, nor do we vainly expect that every malady will yield to a new treatment; all that we wish is to ascertain whether it may not be possible to add some fresh light to the science of medicine, and to afford some new aid for the advancement of the healing art; for the time is now gone by, when every new object is hailed as a great and important discovery, lauded by many, abused by others, until the public mind is led to distrust even the judgment of philosophers, and to deny the knowledge of the wise, when they find their opinions differing so much, and yet so fiercely supported.

OLD CASES OF HERNIA SPONTANEOUSLY CURED.

To the Editors of the London Medical and Surgical Journal.

Gentlemen,—Two cases similar to the following having lately occurred in my practice, I feel anxious to put the report of them before the medical public, that I may, through your Journal, obtain the information I require.

J. K., for several years the subject of inguinal hernia, amused himself by throwing half hundred weights, wearing at the time a truss out of repair, when he suddenly found a renewal of his complaint. He continued at work that day and the following, when, the pain becoming urgent, he, on the third day from the descent of the hernia, sent for me. I found that the inguinal hernia was of the size of an orange, tense, and tender to the touch, great pyrexia, bowels confined, &c. After several attempts of the taxis, part of the hernia was returned, a portion, apparently omentum, remaining in the sac. Leeches, cold applications, and the ordinary medicines were used to relieve the symptoms. After a few days all seemed going on well, but, from some error in diet, he was suddenly attacked with sickness and vomiting, attended with an increase of the hernia. Once more, by means of the taxis, it was returned to its former state, but an inflammatory disposition continued, notwithstanding the application of leeches, &c., and at last fluctuation became evident, when the abscess was opened. From that moment the patient soon recovered, and the abscess healed in a few days. By applying the hand over the former seat of disease, and desiring the patient to cough, the bulging of the intestine is now not to be felt. The question I wish to ask you, or any of your readers, is, whether a radical cure can be obtained through the cicatrisation of the abscess? I must confess I have formed that opinion; how far justifiable in it, it will remain for further inquiry to prove. As a means of safety, I have recommended the patient to continue wearing a truss. Should you or any of your correspondents answer in the affirmative to the above question, this will naturally follow:—would it be advisable to bring on the above process in similar cases, and, by so doing, free the patient from a tedious and troublesome complaint? Fearing to have already trespassed too long on your time, I beg to subscribe myself your constant reader,

H. Meadows.

NEW INSTRUMENT FOR APPLYING LIGATURES.

To the Editors of the London Medical and Surgical Journal.

Gentlemen,—Through the medium of your Journal I beg leave to submit to the consideration of my professional brethren what appears to me an improvement in the means of accomplishing a most important class of surgical operations. Many ingenious apparatus have been devised for the purpose of placing a ligature round a deep-seated artery, an operation, the difficulty of which is always much increased when the position of the artery is altered by contiguous disease. The principal objection to them is, that their complexity may possibly embarrass those who are not habituated to mechanical contrivances. Of simple aneurism needles, the best is one invented by the late T. Alcock, the form of which cannot be better described than by comparing it to a large corkscrew, having about four-fifths of a turn. This is introduced from above, and, winding spirally round the artery, occasions very little separation from the cellular membrane. In the use, however, of this and of all other needles, some inconvenience is found to arise from the necessity of forcing the ligature together with the needle under the vessel, it being almost impracticable to thread the needle after its introduction, at the bottom of a deep wound. This defect I have endeavoured to remedy, by cutting through the eye of the needle on one side, but in such a manner as to prevent the possibility of its catching the cellular membrane when it is withdrawn. The needle is first introduced under the vessel, and the ligature passed over the end of the fore-finger of the left hand, which is very easily guided into the notch by that finger, if the head of the needle can only be felt.

This instrument is made by Mr. D. Ferguson, 21, Giltspur-street, from whose skill and ingenuity I have often derived much assistance in the construction of lithotriptic and other complicated instruments.

I am, Gentlemen,

Your obedient servant,

Charles Brooke, M.B.

THE

London Medical and Surgical Journal.

Saturday, November 22, 1834.

PARLIAMENTARY EVIDENCE.

In our last number we gave a summary of the evidence delivered by Drs. Seymour, Waterfield, and Warren, and entered upon Dr. Wilson's. Dr. W. "would not admit a Physician, actually practising midwifery, to the Fellowship," or a Member of the Council of the College of Surgeons, or a Physician who dispensed his own medicines. He would allow him a licence to practise, but not under any circumstances admit him into the governing body of the College of Physicians. His reasons are the following:—the College would be depreciated in the estimation of the public; the liability of a physician-accoucheur (if he happened to be president or censor) of being called away "to attend Mrs. Such-a-one in labour." It would not, he believed, "be conducive to the dignity of the College." The Doctor professes the highest respect for this class of Physicians, and would admit them into the Fellowship, provided they would renounce the "busy manual part of that branch of the profession." There is a statute requiring a person, before his application to be examined as a candidate or inceptor-candidate, to wait upon the President and all the Fellows residing in London, and seven miles round it. The Doctor thinks it an act of courtesy, but an unnecessary one. Is of opinion, that the power of granting medical degrees should not be conferred on the College of Physicians, as it is at present governed, but to a reformed College believes it might with propriety.

We have been much pleased with Dr. Wilson's evidence. He seems to have appreciated in a proper manner the many gross abuses which exist in the constitution of the College, and not only appreciated them, but boldly suggested measures for their removal. His evidence and his acts display considerable liberality of sentiment, such manifestations as must have disturbed that harmony, which is said to exist so largely in the College of Physicians. They must have regarded Dr. Wilson in the odious light of a reformer, a black sheep in the field, endeavouring to wrench from them their long possessed rights and privileges, and to subvert the great interests of the College. He proposes an entire abolition of the classes of candidates and inceptor-candidates; in this we cordially coincide with him, they are clogs upon the young Physician; he must wait year after year before he can obtain his Fellowship, during which time he is going through only an absurd form of probation, neither useful to himself nor advantageous to the public or profession.

Such relics of antiquity must be annihilated, scattered before the wind. In these days of reform, formality in appearances, which serve but to delude the ignorant and satisfy the avarice of the cunning, must and will give way to measures of real utility, and which are based on common sense. It is truly amusing to reflect on the circumstance, that, prior to a man presenting himself for examination, for a candidate or inceptor-candidate he should call upon the examining body. Call upon them! Why? To curry favour with them, to say to each "My dear Sir, I propose presenting myself in a few days for examination at your College, I hope you will be lenient with me, that you will not interrogate me on subjects which may be so abstruse or practical, that a young physician cannot possibly be acquainted with them, but exercise towards me that urba-

nity, and entertain that sympathetic feeling which is naturally expected from men embarked in the same profession." This is, we presume, the general prelude to admission into the College. But "it is not considered a marked omission if the party does not call."

Dr. Elliotson examined:—As this gentleman is a liberal minded man as well as a distinguished Professor at the London University, we shall give his evidence more in detail. "Will you state what your reasons were, after you became Licentiate of the College, and were at liberty to practise medicine freely in London, for proceeding to Cambridge, in order to find admission as a Fellow to the College of Physicians?" "I had two reasons. In the first place, I wished to reside in an English University; and, in the next place, I wished to become a Fellow of the College, a Fellow being considered a higher sort of person than a Licentiate." Being an Edinburgh Graduate and a Licentiate of the College of Physicians, no course of study whilst at Cambridge was prescribed; it was not required that he should attend any lectures. Took a Bachelor's degree in the sixth year. At the examination he read a Thesis in Latin, which he had to defend against the Professor syllogistically, after which the Professor "read a paper, and I had to oppose or defend it, I forget which." Dr. E. thinks that a very slight medical knowledge would have been sufficient to have enabled him to have answered all the arguments adduced against him; but believes that the examination is now in the highest degree respectable. "After taking your degree at Cambridge, and then applying to be admitted into the order of candidates of the College of Physicians, were you required to undergo another examination?" "Just the same as if I had never been to the College before; the only difference was, that in the first examination they put Celsus and Sydenham before me to construe; in the examination for the candidateship they put Hippocrates and Aretæus." "How long did your examination for the Licentiateship last?" "The examination usually lasts about twenty minutes I think, sometimes longer. If a man answers very slowly it may last a long time." "Do you consider it a strict examination?" "It is not a very extensive or profound examination; but, if a man is very ignorant, he cannot pass even that, and it is very soon discovered what he is by the questions that are asked. It is not an extensive or a severe examination." In Chemistry and Botany the examination is very superficial. The amount of expenses to become a Fellow is about ninety pounds. When asked what advantages accrue to a man from becoming a Fellow, the Doctor replies, "I do not think it contributes to the increased employment of a man. I think that any advantages that may arise from it out of the College depend upon the person himself, just as the circumstance of being a Physician to a Hospital may be of no advantage whatever; but men may make it of the greatest advantage if they choose to work hard. A Hospital may be the means of bringing them before the public, and so it is with respect to a Fellowship; it is possible that it may be made something of. If a person distinguishes himself, and is also a Fellow into the bargain, I think he is thought more of by the profession. A Fellow has also the power of regaining the sum he has expended by his remuneration for teaching, provided he be competent and have the opportunity, becomes a censor and a senior censor, and again gives lectures in

the College." Dr. Elliotson is of opinion that the grievances complained of by the Licentiates are just.

COLLEGE OF SURGEONS.

The College are either following in the path of the Apothecaries' Company, or they are acting in accordance with the spirit of the times. We have always commended the conduct of the Apothecaries' Company for their exertions in inciting the pupils to pass through a more complete course of study than heretofore. No corporate medical body in England has conferred the same advantages as the Apothecaries'. The examinations which they hold are what is termed respectable: they are general, and, we think, fair tests of the pupil's acquirements, but particularly in materia medica. The drugs are placed before the pupil; he is asked, ex. gr.,—What is this?—Radix jalapæ. Where does it grow? In what kind of soil? At what period of the year is it to be gathered? How do you recognise it? thus including its physical characters, then its medicinal properties follow, and its *modus operandi*, with inquiries into the diseases and forms of diseases for which it is desirable to administer this medicine, and what form of it is the most preferable. This is an efficient mode of examination; but when we come to anatomy, the chief subject of examination at the College of Surgeons, how is it conducted?—It is a *vivâ voce* examination; a bone or a muscle is described, without the part being present; and many pupils, we know, have described such part at the College, who have scarcely, if ever, had the bone in their hands. It was no test of their knowledge of the bone; for, like a parrot, they repeated a certain assemblage of words which were learned for the period and afterwards forgotten. The College have, however, begun to change the character of their examination. On last Friday, the heart-palpitating pupil saw on the table in the examination-room bones of various descriptions,—skulls, perhaps with "broken arches," "ruined walls," and "eyeless holes," spread before him in all their appalling characters. They should have adopted this system years ago. It will be of more service, and, we are convinced, much more satisfactory to the intelligent and studious pupil than the old rigmarole, absurd system.

They have effected another improvement also,—in requiring the pupils to register their names at the College, and the teachers of the different schools to transmit to them quarterly returns of all pupils who enter to their lectures. The principle is extended as well to the hospital pupils. We have been informed that the official papers are now lying at the various recognised hospitals to receive the signatures of the pupils; and those who do not sign those documents will be regarded as not having complied with the regulations.

Reports of Societies.

LONDON MEDICAL SOCIETY.

Monday, November 17th, 1834.

W. Kingdon, Esq., in the Chair.

Hydatids in the Left Ventricle of the Heart—Dr. Blicke's opinion on the Pathology and Treatment of Asthma.

The principal speakers this evening were Dr. Whiting, Dr. Blicke, Mr. Kingdon, Mr. Dendy, Mr. Bryant, Mr. Clifton, Mr. Headland, and Mr. Roberts.

Mr. Roberts exhibited a specimen of hydatids in the left ventricle of the heart, attached to

the columnæ carneæ. The patient, a female, dropped dead suddenly, not having shown any symptoms of cardiac disease previously. This case is one of exceeding rarity, and was considered unique, until Mr. Dendy stated a similar one was recorded by Mr. Price in the Medico-Chirurgical Transactions.

In answer to some questions by Dr. Whiting, Dr. Blicke developed his views of asthma, both as regards its pathology and the treatment. He was led to pay especial attention to this malady, in consequence of having suffered very severely from it himself. He considers the disease to be dependent on an acid state of the blood, and that every paroxysm is attended with a species of inflammation or injection of the air-cells, which disappears with the fit, or shortly after. He places but little confidence in therapeutics, trusting almost solely to diet. That which he proposes is strictly animal, for he considers the stomach to be one of the principal causes of asthma, and believes that vegetables are very likely, by the fermentation they undergo, to prove injurious. He accordingly limits his patients to animal food, and that without fat. He gives them an ounce and a half for breakfast, and the same for supper: he also allows two ounces for dinner. This plan is to be pursued for a fortnight, and the quantity may then be gradually raised. After some time, a mixed diet of animal and vegetable food may be used. If this diet be rigidly persevered in, Dr. Blicke assured the Society the asthma would not return. He uses, at the same time, four or five grains of the extract of hemlock four or five times a-day, and directs the patient to keep some extr. glycyrrh. constantly in the mouth, which he thinks proves of advantage in lubricating the air-passages. He has tried the dietetic plan without the hemlock, and has cured his patients, but not so rapidly. He had also tried a vegetable diet with milk in small quantities, with the effect of lessening the duration of the paroxysm, but not its severity. Although he considered the disease to depend on an acid condition of the blood, he did not employ antacids, because, although their administration would arrest the complaint, yet he believed they would prove injurious to the stomach. The Doctor further detailed a case of supposed phthisis pulmonalis which got well under a similar dietetic regimen. Various kinds of food were tried ere that which the stomach could digest in sufficient quantity to keep up the strength was hit upon.

Considerable opposition was made to the plan of the Doctor's, and one individual in particular seemed determined to condemn all plans of treatment for disease having dietetics for their bases. He was of opinion, that those cases in which attention to diet, &c., was supposed to have wrought a cure, were actually cured by time and nature, or, in other words, that the disease had worn itself out. While making these remarks, he undoubtedly forgot that diseases, and those, too, of a most complicated nature, frequently arise from irregular and improper diet; and if such is capable of causing disorders, surely a proper regimen and well regulated diet will at least assist materially in its alleviation or cure. We are inclined to go half-way with Dr. Blicke; to consider that those cases of asthma in which there are decided marks of gastric derangement will be benefited, and perhaps cured, by the plan of treatment he proposes, but we cannot consider that it is adapted to all cases of asthma.

The subject will be resumed on the next evening.

Reviews.

The Life of Thomas Linacre, Doctor in Medicine, Physician to King Henry VIII., the Tutor and Friend of Sir Thomas More, and the Founder of the College of Physicians in London; with Memoirs of his Contemporaries, and of the Rise and Progress of Learning, more particularly of the Schools from the ninth to the sixteenth Century inclusive. By John Noble Johnson, M.D. Edited by Robert Greaves, of the Inner Temple, Barrister at Law. London: Lumley.

There is nothing that can be more gratifying to all who are cultivating the science of medicine, than to observe that the principal founder of that science, by which means the profession has at the present day attained that dignity which every one knows it possesses; that the life and labours of such a man should be handed down to posterity, at a day, too, when we are reaping the fruits of his indefatigable toil, is no more than every atom of

his decayed frame, however dusty it might have now become, has so well merited. The biography, then, of a man possessing the powerful mind of Linacre, whose indefatigable industry can scarcely be paralleled, must, we are assured, meet with its well-merited reward. We fear our space will not permit us to give a sufficiently lengthy detail to do justice to this interesting work. We cannot, however, pass over his classical abilities without recollecting that we owe much, besides the cultivation of the medicinal art, to the zeal of this talented man. It is to him that we are indebted for one of the most useful languages of antiquity; and from his persevering industry have obtained many important translations, which otherwise might have remained concealed in their own, then almost incomprehensible, tongue.

The whole of his biography is truly interesting; we are obliged, however, as medical journalists, to confine ourselves to his medical career. We observe that, in the year 1501, he was elected as physician to Henry VIII.; and may be considered the first who had the honour of filling such an important situation. The work is enriched with numerous interesting anecdotes; amongst others, we observe the medicamental potions prescribed at a time when medical aid was first considered necessary for the preservation of royal blood; and from this part of the work we commence to extract.

"The earliest mandate or warrant for the attendance of a physician at court, which the writer has been able to discover, is dated 33 Hen. VI., a reign fertile in the patronage which was afforded to practitioners of medicine; but in that reign no appointment existed which can justly be called physician to the royal person. By this warrant, the King, with the consent of his Privy Council, deputed to three physicians and two surgeons the regulation of his diet, and the administration of such medicines and remedies as might be sufficient for his cure, without any allusion to the previous existence or permanency of the office which they were authorised for a time to fill, or to a remuneration for their services." The names of the then temporary physicians were "John Arundell, John Farely, and William Ratcliffe; the surgeons, Robert Warren and John Menshall. The medicines and means of cure which they were to employ are specifically enumerated in the warrant, and present a formidable regimen, to which the royal patient was, by permission or sanction of his Council, to be subjected. They were *potiones, syrupi, confectiones, laxativæ medicinæ, clysteriæ, suppositoriæ, caput purgea, gargarismata, emplastra, cerota, ventosa cum scarificatione, vel sine hæmorrhoidarum provocationes, &c.*"

It appears, as well he might, that the royal person became dissatisfied with such treatment, and put more confidence in an ecclesiastic, who, if not more successful in his prescribing, was more lucky with the effect of his medicine, for he acted as chief physician to his Majesty. Then, as regards the difference of pay between the physician, surgeon, and apothecary, the following items relating to the medical disbursements confirm what has been said on this subject, and furnish some curious particulars of the state of medicine in this reign. His Majesty seems to have been actively employed in the good work of healing; and, it must be confessed, that whatever honour accrued to the King's physicians, the chief emolument appears to have fallen to the lot of the apothecary, whose office, as the name implies, was then to provide medicines, without taking any share in the prescribing of them.

"21 Hen. VIII., May 16.—To Cuthbert, the King's apothecary, in full, xxx*l.* xii*s.* vi*d.*

"October, 1.—To Dr. Baugh, for two sick men at Waltham, xv*s.*

"October 13.—To the serjeant-apothecary, his bill, xxviii*l.* iii*s.* x*d.*

"23 Hen. VIII., April 9.—To Cuthbert, the King's apothecary, on his bill, xxx*l.* iii*s.* x*d.*

"July 28.—Paid to a poor child, the which the King's grace heled at Windsor, vii*s.* vi*d.*

"Sept. 11.—To two poor folke that the King's grace heled, xv*s.*

"Oct. 23.—To a poor woman that the King's grace heled at Havering, vii*s.* vi*d.*

"Hen. VIII., Feb. 1.—In reward to Dr Yakesby and another physitian, iiii*l.*

"21.—To my Lord Wiltshire, for a physitian called Dr. Nicholas, xx *angells*, vii*l.* x*s.*

"March—Paid to my lady princess' physitian, in reward, xxvi*l* xiii*s.*"

Thus, we perceive, in these times, the apothecary was not to be despised, though his dignity was then considered far inferior to his noble master the physician; yet his pocket,

which we believe then was not his last consideration, was always more silvery than that of either the surgeon or physician. We must here conclude, and leave the history of this great man to the perusal of our readers. We might extract numerous anecdotes from the work, and fill our columns with its pages, but our weekly limits will not allow us; and, even if they did, we do not like stealing the property of others. This work not only simply contains a sketch of Linacre's life, but also much useful historical information. It must have cost its author much time and trouble; and most heartily do we hope he may reap the success his labours so justly merit.

The Principles of Ophthalmic Surgery, being an Introduction to a Knowledge of the Structure, Function, and Diseases of the Eye; embracing New Views of the Physiology of Vision. By JOHN WALKER, Assistant-Surgeon to the Manchester Eye Institution, &c. 12mo. pp. 195. Taylor, 1834.

There are few organs in the body so important to animals as those of vision, they constitute the great inlet of knowledge, and they might be denominated, metaphorically, the oracle of the mind. Vision is undoubtedly the most important of our senses. Milton lamented his blindness, and has embodied it in one of his most beautiful poetic strains. We cannot estimate the value of this sense, except by a reference to the feelings of those who are deprived of it. Is it not, then, of paramount importance, that the diseases of this organ should be studied by scientific surgeons, diseases affecting the most delicate of structures? Until within a few years this very important department of surgery was occupied almost solely by charlatans, under the title of oculists, by men totally unacquainted with the anatomy of the eye, and completely ignorant of its relations and sympathies with the other parts of the economy. When an operation became necessary, and often before, they performed it with the most daring boldness, the success being under the direction of blind chance. Wenzel said a man must poke out a hatful of eyes before he can operate successfully for cataract, but when the same man had studied the mechanism of this organ, saw the fineness of its structures, the delicacy and importance of each of its parts, his operations were afterwards less successful. He must have felt "that ignorance is bliss." No one at the present day is assuredly justified in treating ophthalmic diseases, unless he has a thorough knowledge of the whole medical science. We know that almost all the tissues which compose the bulk of the body are united in this little apparatus, that each is subject to its own pathological and morbid changes, and that the agents, which can remove them, are as multifarious as those which are employed in the varied affections of the whole economy besides. We are compelled, then, to the conclusion, that ophthalmic surgery is a very important portion of the healing art, and, instead of being left to the oculists, it should form a very material part in the education of the regular practitioner. Not long ago surgeons would have regarded it as derogatory to their character to have been known to practise as oculists, but, since the subject has claimed the particular attention of some of our distinguished physicians and surgeons, every one is now anxious to pay it homage. It will suffice for us to enumerate the names of Farre, Chandler, Guthrie, Lawrence, Tyrrell, with many others of equal reputation, who regard ophthalmic surgery as a part of the duties of a medical man. We have said sufficient to show the importance of this branch of medicine being under the surveillance and management of the medical profession. Let us proceed to give a brief analysis of Mr. Walker's little book. The object of this work, we are informed in the preface, "has been to condense, in a small compass, the chief points in the treatment of the diseases of the eye," with "a short account of the structures and functions of each portion of the organ," as a prelude to the description of its diseases. We commend this plan. Healthy and diseased structures are thus brought together and contrasted.

The book contains an account of the various diseases of the eye, in a very concise form, each occupying a very limited space, so that, if the character of the disease be known, the practitioner can refer to its various forms of treatment at once, without having to wade through a mass of heterogeneous matter before the substance can be found.

We will give one example. "*Hordeolum*, stye, a small inflammatory tumour in the ciliary margin, generally proceeding to suppuration. Bread and water poultices, or evaporating lotions, are proper at first. In the suppurative stage the matter, if necessary, may be evacuated with the point of a lancet. When a chronic tumour remains, without suppurating, the argent. nitr. may be applied, which will cause it to slough, or it may be excised." Here we have the treatment of stye summed up in a few words, but the author has presumed that the practitioner is acquainted with the characteristics of the dis-

case, that he has determined it to be that disease, without referring to the book before us. Mr. Walker does not depict the characters of the disease, or locate it in any structure. "In the ciliary margin," he says, "it forms." But he does not acquaint his readers, what component part of the ciliary margin stye is a disease of; whether of the conjunctival lining of the tarsus, the cutaneous covering, the bulbs of the ciliæ, the tarsal cartilage, or the glands of Meibomius. We notice this omission in many parts of the book, in a future edition we trust it will be remedied; we say in a future edition, because not doubting but that the present one will have, as it deserves, an extensive sale. The diseases in each structure of the eye are described in a concise manner, and the plans of treatment adopted, by himself, as well as by the best authors, are clearly unfolded. At the end of the work is a vocabulary, giving the synonymes of the German and French authors.

To the young practitioner, Mr. Walker's book on ophthalmic surgery is a valuable little present. Every one interested in the subject will no doubt purchase it; it is the production of a good practical surgeon,—and not a compilation.

Practical Observations on Cholera. By Hay George, Surgeon-Extraordinary to H.R.H. the Duke of Gloucester. Pp. 45. 1834.

The present production is scarcely deserving of a notice in the pages of our Journal; but as it purports to be "Practical Observations on Cholera" by a man of some standing and respectability in the profession, a brief reference to its contents will shield us from the charge of partiality. Cholera has created more books, and, perhaps, more medical writers than any other topic; it has been also a very fruitful source of employment for the printers, more, we presume, than for the publishers.

The author has no theory to support; he does not refer the disease to disturbance of any local part, nor does he attempt to assign any exciting, or even any predisposing, causes, for its origin. He is of opinion that this formidable malady which has devastated Europe, existed and was accurately described by Sydenham, Etmuller, &c.; the only difference which it has recently presented is but in degree, in its greater malignancy. We are of the same opinion, that the various aspects which it assumes are mere modifications of one identical disease.

With respect to the treatment, we have the following not very recondite proposition, "that if you can controul the irritability of the stomach, you keep in subjection, and even subdue, the most formidable symptoms of the disease, the purging gradually ceases, and the stage of collapse passes away." This object is to be effected by the liq. potassæ, in the dose of ʒss., and repeated in an hour, or in smaller doses every few minutes, or, as a substitute, "burnt brandy." With such simple agents, this direful disease is always to be successfully combated. Mr. George will excuse us informing him that the same remedies have been fairly and frequently tried, and as frequently failed, that is in the hands of others. Perhaps he may have added to them some magic charm.

In conclusion are related six cases, as cases of cholera; the following is a specimen.

"A servant girl, on her return from church in the afternoon, was seized with chilliness (on a cold day, we presume), vomiting, and purging;" some brandy and water was given to her, which was rejected. "I saw her about 8 o'clock; she was then livid in appearance, cold, pulse scarcely to be felt, trembling from head to foot, vomiting, and appeared to be in torture everywhere from the violence of the spasms." Took liq. potass. ʒj. in some aromatic vehicle, and at 10 o'clock was feverish: "the pulse very quick." This was a well-marked, but not a severe attack of congestive fever. Stimulants were administered in the cold stage of the febrile paroxysms, perhaps properly, and relief was very naturally experienced. The fever continued for a few days, and she recovered. The other cases presented very similar characters.

On such evidence as this does the author infer that liquor potassæ combined with gentle stimulants is a never-failing cure for cholera. We tell him, that such milk-and-water treatment, in the majority of cases, would be like throwing chaff to the wind. We have given the substance of the work; further remarks are unnecessary.

OPENING OF THE NEW WESTMINSTER HOSPITAL.

For some few weeks past little has been doing at the old hospital; accidents only have been admitted, and, with the exception of those who were injured at the late fire, the wards have been nearly empty, and consequently barren of instruction. As a necessary consequence, the students had nearly ceased attendance, and the visits of the medical officers were only occasional. This state is, however, now put an end to. On Tuesday, the 11th November, the new hospital was opened for accidents, and, on the following Friday, those patients who were yet within the walls of the old one, were transferred to the new building.

This Institution, situated near the Abbey, and within the bounds of the ancient sanctuary, is one of the finest ornaments of the metropolis; the style of building is in excellent keeping with the Abbey. The grand entrance nearly faces the principal gate of the latter building: it opens into a large and handsome hall and the great staircase, at the back of which is a passage leading to the operating theatre. This is nearly circular, lighted from above, in the same manner as the theatre

of the Royal College of Surgeons, with an additional window immediately opposite the door. The places for the students are railed off, and, on the whole, it may be called a commodious and handsome theatre. The rooms for the resident officers of the Institution are on the ground and second floors; for the servants, at the upper part of the building. The wards are severally named—Northumberland, Henry Hoare, Queen Anne, Percy, Burdett, Bouverie, King William, Tillard, Queen Adelaide, St. Margaret, Holland, St. John, St. Luke, St. Matthew, St Mark, Arden, Hallett, Sanctuary, and one for the incurables called High Street. It will be perceived by those who have visited the old hospital, that the names of the wards have been retained, and others added, in honour of the principal benefactors of the Institution.

Foreign Medicine.

Antidote to Arsenic.

We observe in the French papers, that a surgeon at Gottingen has discovered that the hydrated peroxide of iron is a powerful antidote for arsenic. It is prepared by pouring nitric acid into a very pure solution of the sulphate of iron, precipitated by ammonia, and well washed. M. Orfila, at the last sitting of the Academy of Medicine, communicated the result of his experiments on this hydrated peroxide of iron.

In his first experiment he states, to a middle sized dog he administered nine grains of arsenious acid, and immediately afterwards three ounces and two drams of the hydrated peroxide of iron, then, without loss of time, he tied the œsophagus. The dog presented no symptoms from the effects of the arsenic, and is still alive, now seventy hours since the administration of the arsenic.

This experiment has been repeated on several other dogs, and has always been attended with the same success, leaving little doubt that in these cases the peroxide of iron has completely neutralised the arsenious acid.

Exp. II.—Nine grains of arsenious acid were administered to a dog, and, in half an hour afterwards, three ounces and two drachms of the hydrated peroxide of iron were administered. The dog died presenting all the symptoms of being poisoned.

M. Orfila stated to the Academy that he did not consider that this last experiment in any way contradicted the former. For at the present day it is well known that arsenic does not destroy life by the local inflammation that it produces, but from its absorption, which causes some deleterious effect over the action of the heart, and also on the cerebral system. This absorption takes place very rapidly, and the antidote is seldom efficacious unless administered in a few minutes after the poison. M. Orfila in the course of a few weeks intends to give a lecture on this subject, and we shall then feel great pleasure in submitting to our readers the experience of this celebrated chemist.

British Hospital Report.

ST. THOMAS'S HOSPITAL.

Aneurism of the Subclavian Artery?

There is at the present time, in Isaac's Ward, of this hospital, a man, named Wm. Pearson, who was admitted for disease of the fore-finger, under Mr. Green. He stated, that for the last three months he had been suffering from severe pains in the right arm, which, in the first instance, came on by an itching sensation in the hand; this plagued him for about three days, afterwards he experienced a sensation of numbness, with coldness of the fingers. One morning he awoke with slight pain at the point of the fore-finger, which gradually increased; a white vesicle formed in this situation; the pain by degrees extended up the arm, which at length became so excessive that he was obliged to discontinue his employment. He experienced the coldness in all the fingers for three or four days, and at length that arm was of much less temperature than other parts of the body. He had constantly been in the habit of working with his arm, and using it with considerable force, his trade being a shipbuilder. He experienced no pains or inconvenience in the neck, chest, or any part of his body. Mr. Green, on an attentive examination, could find no pulse at the wrist, but at the bend of the elbow could feel slight arterial movement. On extending his examination to the upper part of the thorax and shoulder, he felt, on the right side of the clavicular insertion of the sterno-cleido mastoid muscle, an increase of substance, the nature of which he could not exactly ascertain. He also suspected the existence of aneurism of the subclavian. Mr. Travers, Mr. Tyrrell, and Mr. Callaway, also examined the tumour, and materially differed as regards their diagnosis. Some believed it to be aneurism, others the formation of a tumour, which, pressing on the subclavian artery, gives rise to the inconveniences the man is suffering from.

At present we will content ourselves by simply describing the situation and symptoms of the tumour. This, as we have before described, is situated on the right side of the sterno-cleido mastoid muscle, passing backwards opposite to the transverse processes of the sixth and seventh cervical vertebræ; it is very hard, and perfectly immoveable. By pressing, particularly on the upper surface, the circulation in the limb nearly ceases, and a bellows sound, which can be distinctly heard either in the axilla or over the coracoid process, instantly becomes inaudible. The man now complains of no inconvenience, can move his arm without pain, bend his head equally well in either direction. The limb has become of the same temperature as other parts of the body; but pulsation can only be felt in the brachial artery, immediately below the insertion of the teres major and latissimus dorsi. At present it is doubtful whether or not an operation will be performed.

APOTHECARIES' HALL.

Names of Gentlemen to whom the Court of Examiners granted Certificates of Qualification on Thursday, November 13th:—Thomas Middleton, Manchester; Wm. John Harris, ———; Frederiek Palmer, Great Yarmouth; Fred. Yate, Madeley; Thomas Moore Parke, Askrigg, Yorkshire; Theodore Dennis, ———; George Seymour Dixon, Wolsingham, Durham; John Henry Simpson, Loughborough; Edward Tweddle Atkinson, Richmond, Yorkshire; William Abraham Cox, Somersetshire.

MISCELLANY OF FACTS.

We are informed that there is another ease of hydrophobia in the Charing-Cross Hospital. It was previously under the eare of Mr. Griffith, of Pimlieo, one of the Leeturers on Midwifery at the Westminster School of Medicine.

Sir James Eyre, M.D., who was lately eleeted Physieian-Aecoucheur to the St. Guy's and St. James's General Dispensary, had been little more than a month previously a permanent resident in the metropolis.

Dr. Martin Barry, late of Edinburgh, aseended Mont Blanc, aeeompanied by six guides, on the 16th and 17th of September last. After they left the Grand Plateau, where they breakfasted, they experienced great thirst. The variation of the temperature was most extraordinary: at one time they were oppressed with heat, and shortly after nearly frozen, according to the rapidity or tardiness of their progress. As they neared the summit, the exhaustion from the diminished density of the air was so great, that they could only take a few steps at a time. On the highest point they remained an hour and a quarter. Since this sueeessful attempt, we believe not more than twenty are on record. A Count de Tilly, the first Frenehman who ever completed the ascent, has been at the top of the mountains; but it is stated that his lower extremities were frozen, and that it is thought that his feet must undergo amputation.

The brain of the late Dr. Spurzheim is at present in the possession of Dr. William Grigg, of Boston, North America. It is carefully sealed up in a glass vase of alcohol. Dr. Grigg was the most devoted and attached friend Spurzheim had of late years, and elosed his dying eyes. The relie could not, therefore, be in more appropriate possession.

Vacancies by Resignation and otherwise.—Mr. Havil and Mr. Pickford, surgeons of the Brighton Dispensary. Dr. Todd, Physieian to the Sussex and Brighton Infirmary for Diseases of the Eye.

A New York paper eontains the following statement of the conduet of the newspaper reporters during the prevalence of the cholera there:—"*Health of the City.*—As the Board of Health have refused admission to the reporters of the publie press, even under the injunction of seerecy, as preseribed by themselves, the reporters met yesterday morning, formed themselves into a Board, divided the city into districts, and determined to attend to the duty of reporting all eases of cholera for themselves and the publie. The reporters have been in every plaee where disease was stated to exist, have seen the siek, the dying, and the dead; and the people may, therefore, expect to be furnished with a true statement of the facts as they oeeur, without fear, favour, or affeetion."

APPOINTMENTS.

Naval.—Surgeon Jas. Gordon to the Tweed, in plaee of Bothwell, deeeased. Surgeon J. Robertson (*b*) to the Raeer, in plaee of Wellesley, deeeased. Assistant-Surgeon J. Fraser to the San Josef. Assistant-Surgeon Wm. Orr to the President, flag ship. Assistant-Surgeon J. Taylor, supernumerary to the Vietor.

WEEKLY BILL OF MORTALITY.

London, Tuesday, Nov. 18, 1834

Abseess	2	Hooping-Cough	10
Age and Debility	39	Inflammation	19
Apoplexy	8	Inflammation of the Bowels & Stomaeh	6
Asthma	12	Inflammation of the Brain	2
Cancer	4	Inflammation of the Lungs and Pleura	7
Childbirth	6	Insanity	2
Cholera	2	Liver, Diseased	7
Consumption	64	Measles	15
Convulsions	25	Miscarriage	2
Croup	3	Mortifieation	6
Dentition, or Teething	6	Paralysis	1
Diarrhœa	1	Rheumatism	1
Dropsy	12	Small Pox	8
Dropsy on the Brain	13	SoreThroat&Quinsey	1
Dropsy on the Chest	1	Spasms	1
Fever	13	Unknown Causes	4
Fever, Scarlet	14		
Fever, Typhus	1	Stillborn	12
Gout	1		
Heart, Diseased	1		

Males 194 Females 147 Total 341

Inerease in Burials reported this week 17

LITERARY INTELLIGENCE.

Mr. Curtis has in the press a new edition of his Treatise on the Physiology and Diseases of the Eye, showing the intimate Connexion of the Organs of Sight and Hearing, and eontaining a new Mode of euring Cataraet without an Operation.

Louis' work on Phthisis, translated from the French, with Introduction, Notes, and Additions, by Charles Cowan, M.D.E., M.D.P., &c. Now in the press, and will shortly be published.

METEOROLOGICAL JOURNAL.

MONTH. Nov., 1834.	Moon.	Thermom.			Barometer.		De Luc's Hygrometer.		Winds.		Atmospheric Variations		
13		40	44	36	30·06	30·10	75	76	N.	N.N.E.	Fine	Fine	Fine
14		40	47	36	30·18	30·20	76	79	N.N.W.	N.	——	——	——
15		43	45	41	30·20	30·20	80	78	N.N.W.	N.N.W.	——	——	——
16	○	50	51	47	30·20	30·20	78	80	N.N.W.	N.N.W.	——	——	——
17		48	50	45	29·92	29·84	80	81	W.	W.N.W.	——	——	——
18		45	49	39	29·92	30·00	81	79	N.	N.N.E.	——	——	——
19		40	47	34	30·04	30·08	78	76	E.	N.E.	——	——	——

50, *High Holborn.* William Harris and Co.

All Communications and Books for Review to be forwarded (free of expense) to the Publisher, 356, Strand, near King's College.

THE

London Medical and Surgical Journal.

No. 148. SATURDAY, NOVEMBER 29, 1834. Vol. VI.

LECTURES ON THE THEORY AND PRACTICE OF MEDICINE,

BY WILLIAM STOKES, M.D.,

Delivered at the Medical School, Park Street, Dublin.—Session 1833–34.

LECTURE XLIII.

Hypostatic Congestion of the Lungs in Fever — Causes and Treatment of — Typhoid Bronchitis — Principles of Treatment — Management of excessive Secretion—Employment of Emetics—Use of Sulphate of Quinine and Opium in Injections—Typhoid Pneumonia—Gastric Symptoms in Fever —Theory of the Physiological School.

Gentlemen,—Before we proceed to the consideration of the abdominal symptoms of fever, there are a few more pulmonary affections on which I wish to make a few observations. There is one lesion of the lung, not unfrequent in this disease, which consists in a congested state of the posterior and inferior parts of the lung, and is chiefly observed in persons who labour under great debility, and who have lain a long time on their backs. It is of importance to be acquainted with this, because there can be little doubt that though in all cases it is merely the effect of the fever, it may be, in many instances, the cause of death. You can easily conceive, that it might be the cause of death, when you recollect that extensive congestion of the lung will produce asphyxia, by obstructing the pulmonary circulation. This affection has got from Laennec the name of *peripneumonie des agonizans;* but I feel satisfied, that in giving it this appellation he has taken only a limited view of the matter, for it may come on long before the fatal termination of the disease; in fact, it may occur in all cases where the patient has lain for a long time on his back, and where the fluids have undergone any amount of morbid change. Indeed, there seems to be some analogy between this affection and the discolorations of the skin of the back and nates which result, in such cases, from a long continuance of the supine position, and which may be observed in many other affections as well as typhus. If you raise a patient in bad typhus, after having been in this posture for a considerable time, and examine the postero-inferior part of the chest, you will often find a degree of dulness on percussion, and perhaps some crepitus; but if the patient continues in the erect posture for a little time, these phenomena gradually disappear, and the lung resumes its ordinary permeability, except in cases where the congested state has been of several days' standing. Avenbrugger was aware of the occurrence of this affection of the lung. In his remarks on the use of percussion in the exanthematous diseases, he alludes to the occurrence of congestion in the posterior part of the lung, before the eruption makes its appearance. The celebrated Boyer has also alluded to this matter in his works. In giving directions with respect to the posture of the patient in case of fracture, he alludes to the probability of congestion of the lung from this cause, and dwells on the dangers likely to arise from long lying on the back. It would appear from some modern researches of M. Piorry, that some persons are much more liable to this condition than others, particularly those who labour under old age, weakness, or disease of the heart.

Now, suppose you have a case of typhus, in which the position on the back has been long maintained, and particularly if the patient be advanced in life, in a state of great debility, or labouring under organic disease of the heart, you should be on the look out for this congested state of the lungs. In some of these cases it has been found that local bleeding, counter-irritation, and changing the position as much as can be done, have succeeded in removing this condition; but in the vast majority of cases it has occurred in persons reduced to a very weak and exhausted state, and at a period when the fatal termination was fast approaching. We can therefore say little or nothing about its treatment. One thing appears certain, that although we cannot remove this affection when once established in the last periods of life, we may do a great deal towards preventing its occurrence, and for this purpose nothing is of so much importance as *attention*

to position. We know that it is the postero-inferior part of the lung which is subject to this mechanical hyperæmia and consequent solidification. Now, in the early stage of this affection, and in milder cases, we observe that this incipient congestion disappears when the patient is placed in the erect position, and from this we derive the following indication, that in all cases of typhus, where there is great prostration of strength, and where there is reason to suspect a deterioration of the fluids, it is advisable to change the position of the patient frequently. You should be careful in making him lie on his side, changing his position occasionally from one side to the other, and in not permitting him to lie on his back. Four circumstances tend to produce this hypostatic pneumonia: first, lesion of innervation; secondly, the change of the fluids; thirdly, position; and, lastly, the want of proper action in the lung; for when the patient is lying on his back, the posterior part of that organ expands but little on respiration. If you then place him upright, or lay him on his face or side, you get rid, more or less, of the bad effects of position, and enable him to counteract the inaction of the lung, the full expansion of which seems to be a powerful means of relieving this apparently mechanical congestion. In many cases, too, I have found that the use of the cupping-glasses over the affected position, followed in some cases with a blister, had the best effect in removing the affection. In the case of this hypostatic pneumonia in fever, it will generally be right to support the patient's strength, to give a little wine, and the decoct. polygalæ, with carbonate of ammonia.

Let us now proceed to the treatment of catarrh and pneumonia in typhus. I have already stated that in most of these cases there is a complication with disease in the digestive system. Suppose, then, you meet with a case of typhus, in which you find the mucous membrane of the lungs extensively inflamed, is it advisable here to perform general bleeding? Some time ago I was strongly opposed to the use of general bleeding in any case of this secondary typhoid bronchitis, because we found that in many cases it did little good, and in some, by reducing the powers of life, seemed to do great injury. Since then, however, I have been less opposed to this practice, having witnessed its good effects in cases where the disease occurred in persons of robust constitution, at an early period of fever, and accompanied by hot skin, quick pulse, considerable reactive powers, and great dyspnœa, produced *not by the supervention of enormous secretion into the bronchial tubes, but by their inflammatory condition*, which could be ascertained by the stethoscope. Dyspnœa depending on inflammation may be relieved by bleeding; dyspnœa depending on excess of secretion is not. Here the loss of blood will increase the danger of asphyxia, for as the general strength is diminished, the powers of expectoration cease, and tracheal rattle comes on. Here we have a beautiful practical illustration of the utility and value of the stethoscope.

If, then, you have a case of extensive bronchitis occurring as a secondary affection in fever, in a young robust subject, with heat of skin, quickness of pulse, considerable powers of reaction, and dyspnœa, not produced by over secretion at an early period, you will be authorised in taking blood from the system generally. I say this, because I have, in several of such cases, employed venesection with the best effects. But, as a general rule, I believe that, in cases of pulmonary disease occurring in fever, local bleeding is preferable. You will always be able to give relief by leeching or cupping the chest; indeed, I have frequently seen the patient relieved by dry-cupping over the thorax to so great a degree, that I look upon it as one of the most important measures you can adopt in the bronchitis or pneumonia of typhus. I have frequently removed a degree of congestion *sufficient to cause manifest dulness*, by this measure alone. By this proceeding, the congestion has often disappeared in twenty-four hours, and with wonderful relief to the patient. You may also apply blisters, and these valuable agents may be employed at an earlier period than in cases of ordinary bronchitis. If the stomach will bear it, you may give small doses of ipecacuanha or calomel, and Dover's powders.

Suppose you meet with a case of this kind at an advanced period of fever, and find that the patient is very low, has great dyspnœa and cough, and that the stethoscope informs you that there is a copious secretion into the bronchial tubes. Here you must be prompt and decided in the employment of your therapeutic means, for you have a very dangerous affection to contend with, and if relief be not quickly afforded, the patient will die of asphyxia. You must immediately have recourse to extensive counter-irritation and the use of the decoct. polygalæ, with carbonate of ammonia, and the camphorated tincture of opium, and if the patient's strength be much reduced, you must give wine with freedom, and light nutritious food. One of the most favourable circumstances connected with the use of wine in these cases, is the abatement of the frequency of the pulse. Great attention must be paid to the temperature of the surface. I have long been in the habit of ordering the patients to be clothed in soft flannel, and I feel certain that this measure is one of the utmost utility. If after using wine you find that the patient's pulse has come down, you may be sure that it was required, and that it will do good. Sometimes, during the existence of this condition of the lungs, a state of impending suffocation will occur, accompanied by tracheal rattle. Here the patient is in danger of perishing from a mechanical cause,

and this may happen even at a time when he has not arrived at a state of great debility; in fact, while his pulse is still tolerably full, and his skin and extremities warm. It is in this stage that emetics have been recommended. When lecturing on chronic bronchitis, I gave the results of my experience on this point, and stated that in many instances powerful emetics, even though repeatedly administered, had failed to act on the stomach. The insensibility of the stomach here depends on various causes; on lesion of innervation, on asthenia of the stomach, produced by determination of blood to another organ, and, as some think, on that condition which is observed to accompany the want of proper aëration of the blood. From whatever cause this insensibility proceeds, we frequently see that emetics, which in the ordinary state of the stomach exercise their full action, prove inefficient in many cases of this description. A scruple of ipecacuanha is given, then an emetic of sulphate of zinc, and, when this fails, an emetic of sulphate of copper, and these will not only fail in exciting emesis, but may also do a great deal of harm. Again, in many cases, even after vomiting has been produced, and the patient is, as it were, snatched from the jaws of death, we find that the same distressing symptoms return in the space of six or eight hours. Another emetic is then administered, and relief may be again obtained, but the dreaded state of suffocation returns. We had a case in the Meath Hospital, in which free vomiting was produced four or five times, and yet the patient died afterwards of suffocation from the extent of the effusion into the air tubes. To a person who had not witnessed this case during its progress, the appearance of the patient after vomiting would not appear to indicate any thing alarming; yet the awful state of suffocation returned again and again, until emetics lost their power over the stomach, and the patient died asphyxiated. It is plain that if you can produce emesis you gain time for the administration of other remedies, and arrest the progress of the disease towards a fatal termination. This time, I need not tell you, must be employed actively and sedulously in the application of means calculated to remove the disease, and subdue the morbid state of the lung, and no one can deny the meed of praise to my enlightened friend, Dr. Mackintosh, for his bringing this subject before the profession. But it is only one of the many boons his vigorous mind has conferred upon medicine. In a case of this kind, my colleague, Dr. Graves, succeeded in arresting the disease by the application of moxa along the course of the eighth pair of nerves, in combination with other measures. In a late number of the *Dublin Medical Journal* he has handled this subject. In this paper (to which I would refer you) he has proposed the use of sulphate of quinine and opium in the form of injection, and gives the particulars of some cases of impending suffocation, in which these remedies produced very favourable results. He says that tonics and opium exercise a very powerful influence in arresting the super-secretion of the bronchial mucous membrane, and that it has been frequently observed in cases of ordinary catarrh, that these remedies, when injudiciously exhibited, have checked the expectoration. Now one great object in this disease is to prevent this excessive secretion which threatens life, and as our remedies for this purpose are, unfortunately, very scanty, any addition must be of great importance. Dr. Graves has given the particulars of three cases in which he tried opium and quinine in the form of injection. One of his patients was a delicate female, who had got a violent attack of influenza, followed by enormous effusion into the bronchial tubes. In a few hours her strength became quite exhausted, her countenance assumed a livid hue, and, to add to her sufferings, she had nausea and vomiting. An enema of thin starch, containing ten grains of sulphate of quinine and thirty drops of laudanum, was ordered to be given immediately. Shortly after the use of this, she fell asleep, her breathing became less laboured, and she awoke with considerable improvement in her strength; this patient recovered. Dr. Graves next details another case of the same description, where there were great debility, alarming dyspnœa, and a sense of impending suffocation. In this case the quinine and opium were administered as before, and the patient recovered. In another case of a patient in the Meath Hospital, who had every symptom of approaching dissolution, the exhibition of the enema was followed by such good effects, that on the next day she might be pronounced out of danger. I have not used this injection myself, but I think the principle on which Dr. Graves employs it just, and, as far as a trial of it has been made, there is reason to hope for favourable results. At all events we may look upon it as a valuable addition to our means of combating this terrible symptom.

Now with respect to the pneumonia of fever, I have, in the first place, to remark, that this affection, though less frequent than bronchitis, is of equal importance. Suppose that during the course of fever your patient gets cough, hurried breathing, and perhaps some pain in the chest; he has dulness of sound extending over a considerable portion of the lung, and, on applying the stethoscope, you find crepitating râles and feebleness of respiration. In cases of this kind the value and efficacy of treatment will mainly depend on the period of fever, the strength of the patient, and the nature of the preceding symptoms. The more the fever is of the inflammatory type, the earlier the period of the disease is, and the smaller the amount of prostration, the more favourable the prognosis. If the patient is of a robust consitution, the fever of short duration, and the prostration inconsiderable,

you may venture on a single small bleeding, but this must be performed with caution, and always bearing in mind, that an attack of this kind requires very different treatment from the ordinary idiopathic pneumonia. We next proceed to the use of local bleeding, and of calomel and opium, if the stomach will bear it. It generally happens that the system will come under the influence of mercury in two or three days, but in some cases you will not be able to affect the mouth, and these you may look upon as the worst cases, and very likely to prove fatal. We often witness here a kind of struggle between the mercurial action and the disease. To-day the gums are slightly sore and the breath mercurial; to-morrow all this is gone, although the remedy has been steadily continued. Next day you will observe a slight return, and so on. In such a case as this, full ptyalism is almost never produced, and the disease is commonly the victor. I have only known two cases to recover out of a vast number in which we observed this circumstance. With respect to blisters, counter-irritation, diet, &c., the same rules apply here as to the catarrh of fever. Tartar emetic is altogether inadmissible in the treatment of this kind of pneumonia; it can be used with safety in those cases only where free general bleeding may be employed, and this can never enter into the treatment of typhus, where general debility is ordinarily the most prominent symptom. Besides, there is in almost all these cases a complication with gastro-enteric disease, and where this exists, the use of antimonial medicines is always dangerous. On this account we give a preference to the calomel and opium, assisted by blisters, stimulant expectorants, and a light nutritious diet to support the patient's strength. When you find the skin pale and cool, the pulse weak and small, and the features shrunk, you should always give wine. This disease is generally very slow in resolving, the patient convalesces tediously, and requires to be constantly watched.

We now come to the most important part of the analysis of the symptoms of fever, namely, those which have been termed gastric. In using the term gastric, I wish it to be understood as referring not merely to the stomach, but also to the whole digestive tube, the liver, and spleen. *Of all the symptoms of fever, the gastric are the most frequent, the most numerous, the most remarkable for their extent, persistence, and insidious latency, and the most frequently connected with actual organic change.* Of this proposition I think there cannot be the slightest doubt. If we look to the different parts of the system, we shall find that, of all others, the digestive tube is most liable to disease, whether we consider the typhus of this country, or the malignant fevers of warm climates. To undertake the treatment of fever, without an accurate knowledge of the physiology and pathology of the digestive system, and the intimate connexion between it and fever, would be nothing better than practising in the dark; and I feel perfectly convinced that it is to the want of this knowledge we are to attribute the ignorance, the empiricism, and the want of success which have so long disgraced the treatment of fever. Gentlemen, if you were to do nothing for years but study the pathology of the digestive system in fever, your time would be well and profitably employed, and you would have occasion almost every day of your professional life to congratulate yourselves on the importance of the knowledge you have obtained. There is no system so intimately connected with fever as the digestive, and this leads us to a consideration of what has been termed the physiological theory of fever, which has created such a sensation in modern times. It may not be amiss, therefore, to make a few observations on the rise and fall of the physiological doctrines, before we proceed to discuss the gastric symptoms of typhus.

The physiological theory, as propounded by Broussais, may be considered under two general heads; first, those doctrines which apply to disease in general, and, secondly, those which apply to fever and its varieties. M. Broussais appeared before the medical world, at a time when it was exceedingly natural that a man of his great talents should erect himself into the founder of a new school. Humoral pathology, which had been gradually falling into disgrace, had already received a severe shock from the results of anatomical investigation; and it was before the time of Broussais that the immortal Bichat had described the different tissues which enter into the composition of the body, and the division of nerves into those of animal and organic life. Pathological anatomy was advancing rapidly in its brilliant discoveries; and, as every day added to the mass of important facts bearing on the nature and seat of disease, Broussais announced that many affections, looked upon as essential by the old pathologists, could be distinctly traced to a local cause; in fact, that a numerous class of diseases were reducible to the phenomena of local inflammation. These discoveries were hailed with acclamation by a host of admiring disciples, and were expected to lead to the most splendid and important results. The captivating simplicity of a doctrine which attributed all diseases to changes in the solids, thus deriving additional support from the investigations of anatomy, and coinciding with the feelings of the time, could not fail in attracting a host of admiring followers. Besides, most persons were disgusted with the glaring absurdities which were put forward as part of the doctrines of the humoral school. Their pathology consisted almost exclusively of crude notions of certain changes in the fluids, which they termed alkalinity or acidity of humours, corruption of bile, inspissation and tenuity of blood, putrefaction and fermentation of fluids. These, with some strange

ideas of the existence of peculiar unknown fluids in certain parts, as the spirits of the brain, the choler of the liver, &c, were the floating and obscure notions which preceded pathological anatomy. All the ingenious, the inquiring, and those who regarded not dogmas because they had been propounded by great names, became disgusted with the intangible obscurity and manifest absurdity of the doctrines of the humoral school, and embracing every new discovery in science which appeared calculated to shed a better and a steadier light on the nature of disease, they embarked with ardour in the pursuit of pathological anatomy. As anatomy and pathology advanced, the healthy and then the diseased condition of the solids became the topics for investigation, the attention of medical men was turned from the speculations of humoralism to the study of known and perceptible alterations in the solids; and hence it was that attention became exclusively directed to the solid parts of the body.

A little before this time appeared the celebrated Dr. Brown, of Edinburgh, one of the most remarkable men of modern times, whether we consider his boldness, or his ingenuity in defending his doctrines. He declared that life was supported by stimulants, and that disease was referable to one or two states of the system of an opposite character,—one which he called *sthenia*, the other *asthenia*. Thus he divided all diseases into those of sthenia or excess, and of asthenia or deficiency of vitality. All diseases being thus reducible to one of two conditions, all treatment was reduced to the employment of general stimulation and general depletion; for these terms applied not to the local disease, but to the state of the whole economy. Bichat, however, demonstrated the separation in function and structure which exists among the various organs of the body; and M. Broussais, being fully aware of the untenable nature of some of the doctrines of the sthenic and asthenic theory, proceeded in forming his own doctrines, and applied the principles of Brown, *not to the whole economy*, but to each separate organ and tissue. He declared that one part or organ might be in a state of asthenia, or, as he termed it, have a minus degree of vitality, at the same time that another organ was in a state of sthenia, and enjoying a plus degree of vitality. He thus modified very considerably the theory of Brown, applying to each separate organ and tissue those terms which Brown had applied to the system generally. Brown thought that there could not be sthenia of one part and asthenia of the rest at the same time; Broussais declared that all diseases were referable to a plus or minus degree of vitality, and that either of these conditions might exist in any particular tissue or organ, and that one part might be in a state of sthenia, while another part, or even the rest of the economy, might be at the same time in a state of asthenia, and *vice versâ*.

Disease, then, according to Broussais, consisted in an exaltation or depression of the vital action of the affected part; and, as symptoms of disease were reducible to irregularity of function, and function being the product of organs, and organs being the solids of the body, it followed that affections of the solids alone are the cause of all diseases, and therefore that the doctrine that fever is an essential disease or general affection of the system, not referable to disease of any of the solids, was wrong, and the cause of it was to be sought for in some changes occurring in the solids. Now, as inflammation of the digestive tube is one of the most constant lesions observed in fever, he took it as the pathological character of fever, and therefore concluded that fever is only symptomatic of gastro-enteric inflammation, and not in itself an original affection of the whole system, of the nature of which no one knew anything.

Such, gentlemen, are the chief arguments of the physiological school. They contend that all the phenomena of fever are reducible to the symptoms of local disease of the digestive tube, and the sympathetic effects produced by it on various parts of the system. Many circumstances contributed to render this theory plausible, and recommend it to the adoption of medical men. In the first place, there was the great similarity in symptoms, which is so frequently observed to exist between, the ordinary idiopathic gastro-enteritis and typhus fever. In the next place, the constant occurrence of cases of idopathic gastro-enteric inflammation, in which the accompanying fever, though purely symptomatic, bears a strong analogy to typhus. This resemblance of the fever of gastro-enteritis to typhus was one great cause of the theory being so well received. Another circumstance was the discovery of the fact, that of all systems the digestive is that which most intimately sympathises with, and produces the most striking effects on, the brain and nerves. To give an example of this, if you compare the inflammatory affections of different systems and organs, with respect to their tendency to produce prostration of strength, you will find that this tendency is produced by affections of the digestive system to a much greater degree than by those of any other. A patient may have extensive pleuritis, or pneumonia, or pericarditis, or even cerebritis, without any remarkable prostration; but let him get but a slight attack of gastro-enteric inflammation, and the prostration of strength becomes almost immediately a striking symptom of his disorder. Now in typhus, also, this prostration of strength is one of the most remarkable phenomena, and, as it has been generally observed, that the prostration of strength in typhus is proportioned to the amount of gastric derangement, the disciples of the physiological school were thus furnished with an additional argument. A third circumstance was the known tendency of gastro-enteric disease to produce symptoms of

morbid action in the respiratory and nervous systems. We find an infinite variety of these symptoms in typhus, and we know that in other cases they can be traced to the sympathy which attends irritation of the digestive apparatus. One of the most remarkable circumstances in typhus is the alteration of the fluids of the body. If you draw blood from the system, you will often find it of a dark colour, without any appearance of buff, that there is but little separation of serum, and that the clot is soft, without consistence, and easily broken up. There are also various morbid alterations in the perspiration, urine, and alvine discharges. Now, of all diseases, derangement of the digestive organs is the most likely to produce this alteration in the fluids. The digestive system is the main spring of the œconomy, the great alembic, in which the materials for repairing the waste of the system, are elaborated, the fountain from which the blood is supplied for all the various purposes of secretion. Now, if the digestive system be in a state of disease, and incapable of performing its functions in a perfect manner, it cannot furnish the materials of good or wholesome blood, and hence it is that the most remarkable alterations of the fluids of the body are observed in cases of gastro-enteric disease. A fourth circumstance, in favour of the physiological theory, is the great frequency of symptomatic fever in warm climates; and it is well known, that, in these countries, the digestive system is much more liable than any other to the impressions of disease. Fifthly, the results of pathological anatomy seemed to give support to the opinion, that fever is symptomatic of gastro-enteric inflammation, for, in a vast number of cases, we find not only irritation but even extensive inflammation and ulceration of the mucous membrane of the digestive tube. Lastly, the results of treatment tended to give these doctrines additional and, indeed, most important support. The founder of the physiological school claimed credit for his doctrines, inasmuch as a practice, based on these doctrines, had been much more successful than that pursued by his predecessors. This admits of a two-fold explanation. In the first place, as the theory of fever was founded on local inflammation, it followed of necessity that the treatment should be antiphlogistic. Now, it is a well known fact, that the antiphlogistic treatment of fever is, on the whole, more successful than the stimulant. Here was one circumstance, the change of practice from the old stimulant plan to the antiphlogistic, and consequently a greater degree of success. In the next place, was the remarkable efficacy of local antiphlogistic means, a practice for the introduction and inculcation of which the medical world is deeply indebted to Broussais. No one, I think, will venture to deny the great utility of local bleeding in the treatment of fever. But, though we must confess that it is one of the best remedies we can employ in a vast number of cases, still we do not regard it in the same point of view as the followers of Broussais, nor do we conclude that a fever is symptomatic, because leeching has been followed by favourable results. Local bleeding is of use, because it relieves or modifies a disease, which has sprung up in the course of the fever, and which re-acts on the œconomy in proportion to its intensity and the susceptibility of the patient; and the cessation of other symptoms, which frequently ensues on the application of leeches to the belly, is to be explained on the principle, that by removing an irritation, which powerfully re-acts on the system and thereby impedes the efforts of nature, we reduce things to a state of simplicity, and favour the ordinary tendency of the disease to a critical termination.

Such are the circumstances which have contributed to support and advance the theory of Broussais, circumstances which I think have not been sufficiently considered, or properly appreciated by those who have decried his doctrines and practice. On the other hand, it is true, that this theory was formed too hastily, and defended too dogmatically. Happy would it be for mankind if it were true, for then we should have a key to the nature and treatment of the most extensive and fatal of all human affections. The great error of Broussais consisted in the hasty generalisation of the facts on which he based his doctrines, these were neither sufficiently connected, nor was their value sufficiently appreciated. Since the publication of his opinions many facts have been brought forward, and these of so strong a nature, as to induce men to take a different view of the subject, and to consider the gastro-enteric inflammation (so frequently observed in typhus) not as the cause and essence of the disease, but merely as one of the various secondary lesions which arise during its progress, that fever may occur without gastro-enteritis (which is the rarest cause), or with very little of it, that there is no constant relation between it and the extent of the disease, and, therefore, that a treatment, chiefly limited to the employment of local antiphlogistic means, is not founded on a rational view of the subject.

To-morrow, gentlemen, we shall take up the consideration of the gastric symptoms and their mode of treatment.

LECTURES
ON
MIDWIFERY & THE DISEASES OF WOMEN AND CHILDREN,

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Delivered at St. Thomas's Hospital.

LECTURE IX.

Anormal Growths of the Uterus, &c., continued—Cancer Uteri.

Gentlemen,—At the close of my last lecture I had begun to enumerate some of the symptoms which are considered to be diagnostic

of sub-cartilaginous tumour; they are, as you have seen, chiefly mechanical ones, indicative of pressure and displacement; the early symptoms are a frequent disposition to make water and empty the rectum: retroversion and suppression of urine may occur in this disease, and may last for a long time if the growth of the tumour should be slow. Cramp in one or both of the lower extremities, œdema of one or both feet, are symptoms attending those cases where the sciatic nerve or trunks of the absorbents are pressed upon. When the tumour becomes so large as to fill the cavity of the pelvis, there may be great difficulty in passing the fæces, and a total inability of emptying the bladder. The weight of the tumour and its pressure upon the parts at the lower aperture of the pelvis, will occasion a sense of bearing down, and this will not be so much relieved by the horizontal posture, as in simple cases of procidentia arising from relaxation; by degrees the tumour accommodates itself to the parts in which it lies. If an examination be made, a hard, large, resisting tumour may be felt, but the os uteri will have undergone no change; this opening will not gape, as in carcinoma, neither will the patient complain when the tumour is pressed upon. The menstruation will be variously affected, but sometimes regular, more frequently in very profuse quantity, or occurring with shorter intervals, and occasionally, though seldom, wholly obstructed. The constitution is seldom affected, and when it is so, it is merely from the effects arising out of pressure made by the tumour upon other parts. Although no medicine can remove the tumour, there is reason to believe that these tumours have been spontaneously absorbed, and Sir C. M. Clarke has given an interesting case to prove this. If the hollow of the sacrum should be filled by the tumour, and the rectum compressed, advantage may arise from the introduction of a finger into the rectum, by means of which (assisted if necessary by another in the vagina) the tumour may be very gently pushed up above the projecting angle of the sacrum. If this should succeed, it will immediately relieve all the symptoms, and the tumour being once in the cavity of the abdomen, will probably no more descend into the pelvis. I have at this moment an out-patient of St. Thomas's Hospital under my care, where there is is a hard insensible tumour in the pelvis, having all the characters of the sub-cartilaginous species, and which, when I next see her, I shall endeavour to push up above the brim, the pressure upon the bladder and rectum will thus be immediately removed, and the patient freed (for some time, at least,) from her present symptoms.

I know of no symptom by which we can distinguish the presence of *osteoma*. The disease itself is rare, and of very slow growth. It is frequently connected with sub-cartilaginous tumour, but where it is by itself it seldom attains such a size as even to make us suspect its presence, and, where it does, the symptoms are merely those produced by its pressure and weight. Examination per vaginam assists our diagnosis but little, as it generally occupies the fundus of the uterus, and even when we can reach it, is generally (unless very large) so imbedded in the parietes of the uterus, that it is scarcely possible to distinguish it from the sub-cartilaginous tumour.

In *cephaloma* there is no lancinating pain, and few, if any, of the symptoms resulting from the presence of a solid tumour in the pelvis; the patient is liable to occasional attacks of profuse hæmorrhage, and in the intervals there is a fœtid, grumous, sero-purulent discharge. The os uteri is enlarged, open, and very soft, and the uterus itself is felt more bulky than natural; occasionally we have a soft medullary polypus projecting into the vagina, of which I have shown you a specimen, and portions sometimes come away with the discharge or during examination, when the brain-like consistence of the disease may be easily detected. Its progress is slow, and where the intestines and bladder are not implicated, it seems to exhaust the patient by profuse discharge and repeated hæmorrhages.

The diagnosis of *hæmatoma or fungus hæmatodes* from the last mentioned disease is not always very easy. Fungus hæmatodes generally runs a more rapid course than cephaloma; the hæmorrhages are more profuse, and upon examination we generally find the os and cervix uteri harder than in cephaloma, and a portion of it entirely lost in the disease. On passing one finger through the os uteri, we almost always meet with a large mass of fungous growth, which bleeds on the slightest touch; the discharge between the attacks of hæmorrhage is, as far as I have seen, of nearly the same nature as that in cephaloma.

The greater number of the inconveniences attending the presence of hydatids arise from the pressure made by the enlarged uterus upon the circumjacent parts, such as retention of urine from compression of the meatus urinarius, constipation of the bowels from compression of the rectum, œdema and cramp of the lower extremities; these symptoms are not necessarily present, and instances have occurred in which they have been altogether wanting. When the cavity of the pelvis can no longer contain the enlarged uterus, that viscus will rise into the cavity of the abdomen, and may be felt as a circumscribed tumour through the parietes. The function of menstruation is usually interrupted; this might be expected upon the supposition that the complaint was a disease of pregnancy; but it probably depends in some degree on the distended state of the uterus, and the pressure of the tumour against the parietes.

In the examination of a patient labouring under hydatids of the uterus, the body of this

viscus will be found enlarged, and suddenly bulging out from the upper part of the cervix. All these symptoms occur in other states of the uterus; but there remains to be mentioned one other symptom which serves to distinguish this disease from all others, and from pregnancy, and this symptom is the discharge of an almost colourless watery fluid. This watery discharge is to be distinguished from that which attends the cauliflower excrescence by the irregularity and suddenness of its appearance and cessation, being produced by a rupture of the coats of one or more of these hydatids, in consequence of the occasional contraction of the uterus upon them, or of any sudden violence, as in the act of sneezing and coughing; whereas the discharge from the cauliflower excrescence being a secretion from its surface, is constantly escaping. The fluid watery discharge may be distinguished from those splashes of urine which sometimes come away from pregnant women, by being wholly inodorous. In some cases, the size of the uterus increases rapidly, in others slowly, but in all, sooner or later, the parietes of the uterus being irritated by the distension of the cavity are excited to contraction. From this period of time a process resembling labour commences; the os uteri is dilated; the hydatids are expelled by periodical pains; and then, for the first time, danger presents itself in the form of an alarming hæmorrhage. This hæmorrhage is more frightful than that which follows the removal of the placenta from an uncontracted uterus, and the reason is obvious: the placenta covers only a limited space of the internal surface of the uterus, whereas the hydatids spring from every portion of the cavity *.

Our treatment here must be conducted on the same principle as in hæmorrhage after labour. Our grand object is to induce uterine contractions, and when we succeed in effecting this, we remove the chief danger. As in the hæmorrhage of abortion, the degree of flooding shows the extent to which the ovum has become detached from the uterus, so here the discharge will serve to give us some idea of how far the mass is already separated, and of the probable facility or difficulty there will be in bringing it entirely away. We must remember, that before the mass can be expelled certain changes must take place in the uterus for this purpose. The uterus itself must be excited to contraction, and the os uteri sufficiently dilated to permit the anormal structure to pass; it will therefore be our object to restrain the hæmorrhage as much as possible whilst these necessary changes are going on. The patient must be kept as cool and quiet, both in body and mind, as possible. She should be laid on a hard mattress, and cold wet cloths applied to the loins and vulva. Injections of cold water into the vagina may even be had recourse to, and she should merely take small quantities of cooling drinks. When the os uteri begins to dilate, we shall feel some of the vesicles protruding, and, as soon as it is possible, two fingers should be introduced, and the whole mass hooked down into the vagina. If, however, the os uteri be not yet sufficiently open to permit of our doing this, we must restrain the hæmorrhage by means of the sponge plug, as in abortion, until the passages shall have been sufficiently prepared to allow of its expulsion.

In cases of this sort where the uterine contractions are feeble, the ergot of rye will be of considerable service, not only in exciting more vigorous action of the uterus, but also because it appears, from the recent observations of Dr. Negri, to possess a specific action in stopping hæmorrhage.

The symptoms of ovarian dropsy are frequently so very obscure, that the presence of the disease is seldom detected until the tumour has attained a considerable size. The patients themselves feel little or no inconvenience whilst it is small, and hence it is that we not unfrequently meet with small collections of fluid in the ovary, where there had been no suspicion of it during life. Where the swelling becomes considerable, the following symptoms are produced:—the patient feels on the affected side (which is usually the left) a dull heavy pain, which is accompanied with difficulty in moving the leg of that side, and œdema. A circumscribed tumour begins to be felt in the iliac region, seldom affording distinct marks of fluctuation upon percussion, but gradually increasing in size until it fills the whole abdominal cavity. The tumour may frequently be felt through the vagina, and the os uteri so pushed out of its natural situation, that the cervix will be inclined towards the affected side, whilst the fundus is pressed in an opposite direction. As the disease advances, many other symptoms appear in addition to those already mentioned, symptoms which are the usual concomitants of dropsical complaints, namely, loss of appetite, nausea and vomiting, prostration of strength, depression of spirits, deranged menstruation, leucorrhœa, scanty high-coloured urine, emaciation, dyspnœa, &c. At length general dropsy not unfrequently makes its appearance, and the patient either dies from the effects of this, or from complete exhaustion. The disease may be mistaken either for pregnancy or ascites. It may be distinguished from pregnancy by its longer duration, and by increasing at a much slower rate than the gravid womb does. The tumour is also more uneven, and to one side; there is none of the essential symptoms of pregnancy, namely, the swelling and shortening of the cervix, the being able to feel the parts of the child and its movements; instead of the change in the breasts peculiar to pregnancy they are remarkably flabby. Ovarian dropsy may be distinguished from ascites by the tumour being circumscribed, and by the ascites being accompanied from the beginning by a general

* Sir C. M. Clarke on Diseases of Females.

derangement of function peculiar to that disease. The prognosis in ovarian dropsy, generally speaking, is very unfavourable, and the disease mostly incurable. Cases have nevertheless been recorded where the fluid has been removed, either by violent vomiting, or where it has found its way through the Fallopian tubes into the uterus, and been thus evacuated. The disease is usually much protracted, and when inconsiderable, or occasionally even where of great size, may exist a long time without serious disturbance to the general health. From the nature of the complaint but little can be expected in the way of treatment: firstly, because the practitioner is seldom consulted until it has attained a considerable size; and, secondly, because the parietes of the sac are so changed in their structure, that there is no chance of procuring absorption; and, thirdly, because the evacuation of the fluid by an operation is seldom very feasible, on account of the sac being frequently divided into distinct cells, or containing other sacs within itself, which would thus prevent the fluid from being drawn off. The chief object of treatment will be to alleviate the various symptoms which have been produced by the pressure of the sac, and prevent, if possible, any further increase of size. Where, however, the tumour has attained a very considerable bulk, and there is distinct fluctuation, the operation is the only means for relieving the patient. The result, however, of tapping ovarian dropsies is, on the whole, so unfavourable, that I should recommend the greatest caution in deciding upon this point. The cyst itself is seldom attached with much firmness to the abdominal parietes, and being generally of a tough, semi-cartilaginous tissue, it is apt to be pushed before the point of the trocar, and thus separated from them; so that, when an opening is made, some of the fluid is liable to be effused into the cavity of the peritoneum. When a fluctuation is distinctly felt in the vagina, to such a degree as to show that the tumour projects deeply into the cavity of the pelvis, it will be by far the safest plan to make the puncture through the vagina, as being the most depending part; and I have known of patients who, to all appearances, have been permanently cured by this means.

I now, gentlemen, come to the consideration of a disease, which, from the acute sufferings it excites, the defiance it sets to every species of treatment, the destructive ravages it produces in the parts attacked, and the almost invariably fatal termination of its course, has been justly looked upon with peculiar dread by women,—I mean *cancer of the uterus.* I know of scarcely any disease where the healing art affords such a melancholy instance of its inability to render assistance as in the present case, where the practitioner is frequently compelled to witness the most intense suffering and gradual destruction of the patient, under circumstances of peculiar aggravation, without being able to arrest the fatal progress of the disease, or allay his patient's misery beyond that of temporary alleviation.

I apply the name of cancer to those dangerous changes of structure which are so frequently observed to take place about the middle of life in the substance of the uterus, forming a hard and painful tumour, having usually its origin in the os and cervix uteri, and continuing to increase in size, hardness, and sensibility, until excited by changes which take place at the cessation of the menses, or some other cause, it becomes a foul, corroding ulcer, with increasing severity of pain, horribly offensive discharge, great debility, repeated hæmorrhage, and complete destruction of a more or less considerable portion of the uterus, until death usually puts an end to the most excruciating sufferings. Hence cancer has been divided into two stages,—*scirrhus* and *carcinoma;* the former being the stage of induration, the latter that of ulceration. Scirrhus is peculiarly liable to affect glandular structures: thus we see it attack the mammæ and axillary glands, the testes, &c.; and hence it is why the cervix is more liable to be attacked by this disease than any other part of the uterus; it becomes hard and almost cartilaginous to the feel, and by degrees the whole uterus becomes affected. It would seem in some instances to be a result of inflammation of the cervix uteri, where the patient has been subject to leucorrhœa, and especially the white mucous discharge which is furnished by the gland of this part. Two varieties of this disease are to be observed in the early stage: first, there is a firm tumour, of a rounded form, springing from the surface of the cervix uteri, or imbedded in it, whilst the other parts of the uterus are perfectly healthy, except that its parietes are thickened as the disease advances, and that its cavity becomes larger than that of a healthy unimpregnated uterus; secondly, instead of any distinct tumour, the whole cervix of the uterus becomes larger and harder; and, if this thickened part be examined after death, by cutting into it, it puts on the same appearance which a regular carcinomatous tumour possesses *.

The uterus, in a state of scirrhus only, is generally much larger than in a healthy state, considerable pressure makes little impression upon it, the cut surface presents a fibrous and mottled appearance, not the usual fibrous arrangement found in a healthy state, but a deposition of a new material, in which the disease consists. It is a peculiar morbid and hard substance, occupying the interstices between the natural healthy fibres, with which it is interwoven, and to which it adheres very firmly and closely; as the scirrhous material increases the healthy fibres and structure of the uterus vanish; in some cases the scirrhus is in patches, which are scattered irregularly here and there, while, in other cases, the deposition is very universal. It is not usual for

* Sir C. M. Clarke, on Diseases of Females.

the scirrhus to be confined to the neck of the uterus, and sometimes, though rarely, the body only is affected. When minutely examined with a magnifying lens, the morbid substance of scirrhus looks like acicular lines, or granules, or ligamentous fibres, paler than the healthy structure of the part.

"The substance of scirrhous uterus when cut into (says Dr. Baillie) is thick and hard, and when its structure is examined, it shows a whitish firm substance, intersected generally by strong membranous divisions; this is the common appearance of the structure of scirrhus in other parts, and it differs less from the natural appearance of the structure of the uterus than that of any other part of the body." The appearance which has just been described, as constituting scirrhus, is of very frequent occurrence, but it is more usual to find the disease in a more advanced state before it proves fatal, and it becomes gradually soft and ulcerates *. It is of the greatest consequence to form an accurate diagnosis of this disease, because, at its commencement, it frequently escapes the notice of the patient and her medical attendant, sometimes existing for several years without any peculiar inconvenience, and easily mistaken for other affections; but when it does break out in full violence, it is generally found to have attained such a degree of inveteracy and extent, as completely to set every species of treatment at defiance.

The patient at first perceives deep-seated pains in the pelvis, which are neither severe nor lasting, but are generally induced by sexual intercourse, by the approach of the catamenia, upon evacuating the bladder and rectum, by rough examination of the abdomen, or per vaginam, and occasionally by certain changes in the weather; by degrees these pains become more severe and of longer duration, and are characterised by a peculiar sensation of stabbing or burning, which always proceeds from *one* spot, frequently transfixing, as it were, the whole pelvis; this is frequently accompanied by a sensation of weight, or dragging pain, or even numbness in one or both thighs, with varicose swellings of the veins of the part. The patient complains of painful scirrhus-like knots in the breasts, or that the catamenia has become of late irregular, that the discharge itself is of an unusual appearance, being watery and fœtid, and appears also in the intervals of the regular menstrual periods. The symptoms experience a considerable increase; the digestion becomes deranged; the taste depraved; the tongue foul, with nausea and vomiting; the nights are restless and disturbed, from attacks of pain and fever, which constantly recur towards evening; the strength is impaired, and the appearance of the patient denotes a state of general cachexy.

If the disease pass into open cancerous ulceration, the symptoms above enumerated become greatly aggravated, the attacks of pain recur at night with most intolerable severity; the passage of the fæces and urine becomes more and more obstructed, the patient is no longer able to leave her bed; a horribly fœtid discharge is constantly present, frequently producing severe excoriations of the external parts, a low fever with increasing emaciation of the body continues, and not unfrequently spongy pieces of putrid slough come away with the discharge. Upon examination per vaginam, at an early stage of the disease, the cervix uteri will be found swollen, hard, and cartilaginous to the feel; pressure produces lancinating pain; as the disease advances, the os uteri will be found also to have undergone a change, it becomes larger than natural, still however retaining its original shape; this open, or gaping, state of the os uteri is sometimes sufficient to admit the extremity of a finger, which, when introduced into it, feels as if surrounded by a firm ring. As the disease advances the lips of the os uteri will be felt uneven, knobby, and hard; the vagina is relaxed, its parietes covered with a bad coloured fœtid mucus, and the patient complains much of pain during examination.

Even in the early stages of this disease the stomach will be liable to be in some degree affected, though the more severe affections of this organ do not generally attack the patient until the ulcerating stage has commenced; the stomach is much more disposed to be affected in some cases than in others, and a mild degree of the disease will strongly excite the sympathy of the stomach in one patient, whilst in another it will hardly be brought on by the most violent forms of the disorder; as in hernia, so in carcinoma uteri, the sympathetic action is occasionally more distressing than the disease itself. The functions of the stomach having been once disturbed by its sympathy with the disease of the uterus, the process of digestion becomes interrupted, vomiting spontaneously arises, or is artifically produced to relieve the sense of weight and oppression, and the patient thus experiences temporary relief from the symptoms which spring immediately from the loaded state of the stomach; the relief thus obtained conceals from the view of the patient, and often from that of the practitioner, the true cause of the malady, which insidiously proceeds to that stage over which the resources of the art of medicine can exercise but little control *.

In a state of open carcinoma the edges of the os uteri become more uneven, just as if pieces had been nibbled away. The disease has now generally extended to the vagina, the parietes of which feel hard and thickened in different places. The ulceration almost always commences in the vagina round the os uteri, extends along the cervical portion, and destroys the greater part of the uterus. In this state the ulcerations are covered with shaggy and fibrous portions, there is no appearance of

* Dr. Hooper's Morbid Anatomy of the Uterus.

* Sir C. M. Clarke on Diseases of emales.

healthy granulations, and the whole appearance exhibits a sloughing pulpy surface. If the bladder and rectum have not sympathised with the disease in its early stage, they will seldom escape at this period, not only from the consent which obtains between all these organs, but also from the disease extending itself to these in common with all the adjacent parts. Such a degree of thickening of the meatus urinarius sometimes takes place, as to impede the passage of the urine, and to require the use of the catheter, shortly after which the urine will gradually and spontaneously escape, not through the urinary passage, but from a communication formed between the posterior part of the neck of the bladder and the vagina; portions of coagulating lymph will be frequently washed away from the parts in the passage of the urine. On passing the finger further into the uterus, it will be found full of spongy excrescences which easily bleed. On examining through the walls of the vagina, or per anum, the body of the uterus will be found enlarged and hard, and not unfrequently the parietes of the rectum implicated in the disease. When the vicinity of the rectum to the uterus is considered, it will be expected that a communication between the former part and the vagina would at the same time take place, but this is not so, as in many cases where there is a fistula of the bladder there will be found no communication between the intestine and vagina. Still, however, this circumstance is now and then met with, and from the moment that it is established, no fæces pass through the anus, the external parts forming the channel through which urine from the bladder, fæces from the rectum, and pus from the ulceration are discharged. The stench now becomes intolerable, and the hips of the patient lying almost always immersed in the excreted matters, the soft parts inflame, and sloughing takes place; the constitution possesses no power of compensating for this waste of strength and of substance; the functions of the stomach fail, little food is received, less is digested, and sometimes incessant vomiting takes place, first of matter usually contained in the stomach, and afterwards of bile, which regurgitates from the violent efforts at retching. Small ill-conditioned sores arise in the angles of the mouth, and tease the patient not a little; the tongue becomes sore, its surface being sometimes pale, dry, and glossy, and sometimes having a dark red colour. The mucous membrane (says Sir C. M. Clarke) which lines the mouth is liable to small ulcerations having a languid base, and these are called aphthæ; perhaps none of the mucous membranes are exempt from these appearances in certain states of weakness produced by long continued disease, they are occasionally seen about the margin of the anus, and the author has frequently noticed them upon the surface of the vestibulum. A burning heat of the stomach and of the intestinal canal becomes another cause of distress to the patient; this sensation may be dependent in part upon the irritating quality of the fluids of the stomach, and in part upon the presence of aphthæ upon the primæ viæ. Another symptom by which the patient is much distressed is an insatiable thirst which nothing can allay; this greediness of liquids is not present during the whole of the disease, but it arises at that part of the complaint at which so little blood remains in the blood-vessels as not to furnish fluids for secretion. Something like this takes place in hæmorrhages where they become profuse; to sum up the patient's misery, and to render her situation more distressing, she is tortured by a violent acute and darting pain, sometimes resembling a sharp instrument piercing the pelvis in different parts, becoming sometimes so intense, as to make the most patient woman cry out, and depriving her of all quiet by day, all repose by night*. The peculiar lancinating pains which come on towards night, the fœtid discharge, and, above all, the result of an examination, cannot fail of affording you a certain diagnosis as to the nature of the disease.

LECTURES
ON
FORENSIC MEDICINE,
DELIVERED BY
DR. HAY GRAHAM,
At the Westminster School of Medicine.

LECTURE VII.

Infanticide.

Gentlemen,—We now proceed to treat of the crime of Infanticide. The destruction of the offspring is a crime which, however abhorrent to our feelings, and contrary to the laws of nature, is not confined to civilised men, but is of frequent occurrence in every period of history, and in every stage of civilisation. Indeed, it would appear that maternal love, however much eulogised by the poets, and by philosophers, does not always burn with the same pure flame, either in the human species or in inferior animals, amongst whom the destruction of their young, both by omission and commission, is not of such unfrequent occurrence. In man, this crime may proceed from a variety of causes:—as a sacrifice in the superstitious rites of a blind and bloody religion; as a conservative principle, worthy of a place amongst the doctrines of some of our political economists, to prevent the excess of population, and the consequent scarcity of provisions; but these do not come within the scope of our province. In the civilised countries of Europe it is, unfortunately, of too frequent occurrence, often proceeding from a desire of concealment, and avoiding that disgrace which the infraction of the moral laws

* Sir C. M. Clarke on Diseases of Females.

of society brings with it; but, more generally, from a want of natural affection, the wretched mother being lost to every sense of shame, and all her better feelings blunted, she wishes to be disembarrassed of what would necessarily prove a burthen and a restraint upon her. But, in the investigation of the physical proofs of infanticide, the various motives which may agitate the human breast do not fall within the scope of our province. Whether it proceeds from the sense of shame, or the want of every virtue; from the desire of revenge, or the grasping hand of avarice; from the fanaticism of religion, or the blood-stained worship of false gods; or from the evil calculations of prudential forethought; are subjects of consideration for the philanthropist and the philosopher, but not for the medical jurist.

Infanticide, in its abstract sense, includes procuring abortion with a criminal intent; for there is not any real difference in the heinousness of the offence, whether the life of the infant is destroyed in the womb of its mother, or in its passage into the world, or immediately after birth; in any of these cases, the crime, abstractedly considered, must be one and the same. For this reason the legislature visits each with the same capital punishment, and draws no distinction, except the absurd one of being "quick" or "not quick," a distinction which is physiologically proved to be false. Having already, in our last lecture, treated of abortion both natural and criminally procured, we will, without further preface, enter upon the subject of Infanticide, which means *the murder of a child during or after delivery*.

In the investigation of this subject, the questions which naturally arise and present themselves for our consideration are the following, namely, first, whether the infant has been born alive; secondly, if born alive, whether it had arrived at the full term of utero-gestation, and was capable of living; and thirdly, if born dead, whether death took place during or before delivery.

If the infant had not arrived at the age of seven months, it is not to be considered as capable of living, but is termed *an abortion* or *miscarriage*, although it was born alive and might continue to live for some hours; and it should be so considered, notwithstanding there are cases on record of children having been reared who were born at the early period of six months.

If the child had arrived at the full term, and, on examination, it was proved to have breathed, it does not necessarily follow that it was born alive; for it might have breathed when the head only was born, and have died before it was entirely born; or it might have breathed, and even have uttered cries, the vagitus uterini, whilst in utero, or rather in the passages, from the discharge of the waters and the atmospheric air running into contact with its face.

As there are several other cases wherein death might have taken place during birth, it will be as well to pass them in review previous to the investigation of the crime of infanticide.

1st. *The protracted duration of labour.*—When the labour is protracted, notwithstanding the presentation should be natural, yet, from the long-continued contractions of the uterus, the head may be jammed against the pelvis, the chorda umbilicalis and placenta pressed together, so that the blood may be determined to the brain, and apoplexy take place. It need not be observed, that labour is frequently protracted, either from debility and the want of labour-pains, or from the narrowness of the passages, or from the unyielding rigidity of the orifice of the uterus (the os tincæ), or of the vulva, or from the large size of the infant, and many other causes.

When apoplexy thus takes place, there is generally a greater or less degree of tumefaction about the occiput; the subcutaneous cellular tissue will be found to contain a yellowish serum; the blood-vessels will be turgid; whilst the other parts of the head present a natural appearance. But should the child have died of apoplexy during parturition, and the labour not protracted, these appearances of tumefaction, subcutaneous serosity, and turgid blood-vessels, may not exist. If the labour has been protracted to a great length, then the external appearances are still more strongly marked. That part of the head which first presented itself will have a soft tumour containing bloody serum or even blood. Sometimes the periosteum is detached, and raised up with black and fluid blood; the bones of the cranium moveable, and the sutures loosened; and the bone beneath the tumour stained with blood. At other times, the head is lengthened or drawn out in one direction, and flattened in the other. Occasionally, one or both the parietal bones, as also the os frontis, have deep indentations and depressions, with or without fracture. The fractures are sometimes longitudinal, at others angular, and sometimes starred. The skin of the head, the neck, and the face, may be of a purplish red, as if bruised, and sometimes livid and extravasated; the plexus choroides, and the vessels of the pia mater are injected with blood; and extravasation may take place in various parts of the brain. It is also to be remembered, that apoplexy, with extravasation on the brain, and ecchymosis of the skin, may take place during a protracted labour, notwithstanding other parts than the head may be first presented.

2ndly. *Compression of the umbilical cord, or its being twisted around the neck,* may produce apoplexy and death. Compression of the umbilical cord takes place when it comes out prematurely, and is compressed either by the neck of the uterus or the head of the fœtus. When it is twisted, there will be seen a reddish circular mark around the neck, but this unaccompanied with any abrasion of the epidermis. It is unnecessary to

say that the above-mentioned appearances of congestion on the brain will be seen on dissection.

3rdly. *Any profuse hæmorrhage* may occasion death. This may be produced by a total or partial separation of the placenta, by the rupture of the uterus itself, or of the umbilical cord. In any of these cases the fœtus is bloodless, of a pale waxy appearance, the muscles and the viscera are colourless, the veins and arteries, and the auricles and ventricles of the heart, are empty and collapsed.

4thly. *The weakness of the fœtus* may be the cause of death, which may proceed either from its immaturity, or from some disease, or from the debility of the mother and want of nourishment.

5thly. The necessity of terminating the delivery in order to save the life of the mother, as in cases of mal-conformation, convulsions, or flooding, also where the insertion of the placenta is over the orifice of the uterus, where the labour makes no progress, or where there is a breech or cross presentation. In these and such like circumstances it is necessary to have recourse to art, sometimes the hand is sufficient, at others the forceps are used, or recourse is had to embryotomy. In these cases the impression of the fingers or the marks of the instruments would be seen on the body of the fœtus.

6thly. In addition to all these causes of death there still remains one deserving your notice, which is, where the pains come on so suddenly, that, whilst the woman is walking or standing, the fœtus may escape from her, and, falling on the ground, thus be killed; or, whilst straining at stool, the woman might be seized with a pain, and the child dropped in a privy. Dr. Gordon Smith relates the case of "a woman, who was tried at the Old Bailey for the murder of her child by dropping it into a privy. She declared that while there for a natural purpose an uncommon pain took her, the child fell, and she sat some time before she was able to stir. On this occasion a practitioner was examined on the possibility of such an event, who stated that an instance came within his own knowledge, where, while the midwife was playing at cards in the room, the woman was taken suddenly, and the child dropped on the floor." Dr. Gordon Smith then proceeds to state a case, which happened in the circle of his own acquaintance, where a lady, who had borne several children, and must therefore have been alive to the import of uneasiness in the last hours of pregnancy, was sitting in company at dinner, and perfectly free from any consciousness of approaching labour, when she experienced an inclination to repair to the water closet. She had scarcely got there when she was delivered of a child. Had the place of retirement been differently constructed, this infant might have perished." In such a case it may be urged, that the woman, on finding what has happened, ought to give immediate alarm. But we must allow, that in the first instance, on account of the surprise and exhaustion of such an occurrence, she might not be able so to do, and after having recovered and reflected upon it, that it would only expose herself and not restore the child, she would naturally conceal the circumstance. Yet it must be borne in mind, that where it is the first child, such sudden parturition is by no means likely to take place.

M. Pasquier of Lyons makes mention of an accouchement so sudden, that the umbilical cord was torn, and the child fell on the floor.

M. Meirieu mentions the case of another woman, who had scarcely time to prevent the child from falling, and where the umbilical cord was also torn.

These, gentlemen, are the principal causes, when the death of the fœtus takes place during labour; but frequently death takes place in utero at different periods of pregnancy, in which case, whatever may be the age of the fœtus, if expelled shortly after its death, no change is observed either in form, colour, size, texture, or any other respect. When the death takes place some little time before labour, during which time the waters have passed off, the fœtus begins to putrefy and turns black, and the disengagement of a fœtid gas frequently escapes per vaginam. When the fœtus perishes in the midst of the amniotic waters, and afterwards remains several days or weeks in the uterus, the body loses its firmness, and the limbs are flexible; the epidermis is white, thickened, and easily removed by the slightest touch; the skin is purplish, of a brownish red, sometimes all over, at others only in some parts; the subcutaneous cellular tissue is filled with a reddish or bloody serum; the veins, arteries, and membranes are all equally red; the viscera are reduced to a state of semi-fluidity; the bones of the cranium are loosened and denuded of their periosteum; the head has lost its form, and becomes flat by its own weight; the brain is fluid; there is no ecchymosis or tumefaction about the vertex, which generally is the case when the child is born alive; the thorax is collapsed, flattened, and drawn inwards; a slight examination of the organs of respiration and circulation is sufficient to show that the child has never breathed; the umbilical cord is thick, soft, easily torn, and injected with a red or livid coloured serum; the abdomen is flattened; it is not uncommon to see the periosteum separated from the bones of the legs and arms by means of the same reddish serum. These changes mark a peculiar mode of decomposition different from that which takes place in the open air.

In some cases of rare occurrence, the fœtus, either uterine or extra-uterine, when it has not been expelled for a long time after death, becomes converted into a firm, dry, solid,

friable substance, of an unctuous nature, inflammable, and intermediate in consistence between fat and wax, hence termed "adipocire," a substance which is frequently, but not always, found in the head of the South Sea whale, and familiar to you under the name of spermaceti. Of this I shall hereafter have occasion to speak when treating of death by drowning, and the putrefaction of animal substances.

Sometimes the fœtus becomes of a stony consistence, and remains in utero, until the natural decease of the mother takes place. At other times it degenerates into a state of colliquative putrefaction.

Having pointed out the most striking of those changes which are observed to take place when the fœtus perishes in the womb of its mother, we will now endeavour to investigate those signs or appearances by which it may be ascertained that the child has been born alive. I need not observe that to "*breathe*" and to be born alive are, in the medico-legal acceptation of the terms, synonymous. Yet, correctly speaking, a child may be born alive and never breathe, being either in a state of asphyxia, from which it may not recover, or in a moribund state before the vital spark has become extinct.

The decision of this question, whether the child has breathed, depends entirely on the examination of the thorax, of the lungs, of the canalis arteriosus, and the canalis venosus, of the chorda umbilicalis, and of the diaphragm.

In the investigation of this very important point, we should 1st observe those external appearances which tend to ascertain the age of the fœtus; 2nd, we should weigh the body with the greatest nicety, and 3rd, we should examine with the greatest care if in any of the passages communicating with the trachea, and particularly if in the structure of the thorax there exists any impediment to respiration, and if the external form of the chest is rounded, elevated, or flattened.

As long as the fœtus remains in utero the lungs take no share whatever in the circulation of the blood, and receive no larger portion than any other organ; but the moment the fœtus ceases to communicate with the mother, and begins to assume an independent existence, respiration becomes an indispensable function; but respiration cannot take place without causing great changes to take place in the lungs. It is these changes we are now about to examine which some authors call the docimasia pulmonalis, or rather the docimasia of respiration*.

The introduction of the air into the air cells of the lungs of the fœtus diminishes their specific gravity, at the same time that it increases their absolute weight. This increase of weight proceeds from the influx of blood into the vessels of the lungs. The combined effect of the ingress of air and of blood into the lungs is a change of volume, a change of situation or position, and a change of colour. Until this epoch they seem, if one may use the expression, to have been withered, and of a dull dark red colour, occupying only a very small space in the bottom of the thorax; after respiration they entirely fill the thoracic cavity, and cover the pericardium to a greater or less extent; the colour becomes more clear, and more or less pale, according to the extent the blood has entered and filled the vessels. The air cells, being filled with air, give an emphysematous appearance to the substance of the lungs, which was previously compact, and resembling the spleen. The blood of the pulmonary vessels becomes frothy. The chest, which was flattened before respiration, is now fuller and rounder. The diaphragm, having been pressed downwards by the respirations, is not so deeply situated in the cavity of the thorax. These, gentlemen, are the first changes which take place, others shortly follow, such as the gradual disappearance and closure of the foramen ovale, the shrivelled and collapsed state of the canalis arteriosus, and also of the canalis venosus, which, previous to respiration, conducted a portion of the blood directly from the vena umbilicalis to the vena cava.

It is in the works of Galen that we first meet with the hydrostatic test of the lungs swimming or sinking in water as a proof of the child being born alive.

To make this experiment the lungs are to be removed from the cavity of the chest, along with the heart, having previously passed a ligature around the larger vessels. The trachea, or wind-pipe, should be divided close to its insertion into the lungs, and having wiped away with a sponge whatever blood may be smeared over these viscera, they should be placed gently in a vessel full of water. The vessel should be at least a foot in depth, so that the column of water may be proportioned to the bulk, as well as to the weight of the lungs and the heart, and thus able to support them, in case they should swim on its surface. It is necessary that the water should be clean and clear, and not dirty or holding anything in solution, as salt or saline substances, which might increase its density, hence river water is preferable to well water. In respect to temperature, it ought not to be hot, because that would increase the dilatation of the lungs, and thus promote their swimming, especially if there was any tendency towards putrefaction. Neither should it be at the freezing point, for that, by contracting the lungs, might expel a portion of air which they contained. In short the temperature ought not to be above 60° or under 45°; but I am inclined to think it is sufficient should the temperature be that of the atmosphere or of the child's body.

* The word docimasia is derived from the Greek δοκιμάζω, to explore or examine. It was a term employed in assaying minerals, to ascertain the quantity of metal contained in the ore, but it is now applied to the examination of the lungs in cases of suspected infanticide.

The lungs, with the heart, being, as I have mentioned, placed in the water, we must attentively notice whether they sink or swim, whether they sink quickly or slowly, or whether any part of the lungs seems to sink with difficulty, or whether they stop or not in the middle of the vessel.

Afterwards, the heart along with the pericardium is to be separated from the lungs, and the same experiment repeated with the lungs only. Here it is of importance to observe, whether, by changing the situation of the lungs in the water, or by placing uppermost that which was downwards in the water, they sink more readily or more slowly, or whether one part swims constantly and is only dragged beneath the water by the weight of the others. This part ought to be particularly marked and noticed.

Each lobe of the lungs should equally be submitted to this experiment, in order to ascertain whether each is affected in the same manner, or if one lobe swims whilst the other sinks to the bottom, and whether, as generally is the case, it is the right lung which swims. Afterwards, the experiment should be repeated with each lobe cut into several pieces to ascertain not merely whether they swim, but whether some pieces may not swim. In performing this experiment it is highly necessary to keep separate the pieces of the right lung from those of the left. After having submitted these pieces of the lungs to this hydrostatic test, each piece should be pressed between the fingers under the water to observe if any bubbles of air rise to the surface; and if, after having thus pressed them, they still continue to swim, or if they fall to the bottom of the water. Whilst dividing the lungs into pieces, you should pay attention, when cutting through the parenchymatous substance, whether there is any crepitation, or whether it appears compact, whether it offers any pathological appearance whatever, and whether the vessels which penetrate it contain much or little blood.

In addition to this hydrostatic test, it has been proposed to ascertain by the increased *weight* of the lungs after respiration whether the child was born alive. About fifty years ago, Ploucquet believed he had discovered the exact relative weight of the lungs to the body, which he asserts to be as one to seventy if the fœtus had not inspired, and as two to seventy if respiration had taken place. To ascertain this important fact he had only made three experiments. Afterwards, Messrs. Schmidt and Chaussieur, totally unconnected with each other, the one at Vienna and the other at Paris, made several hundred experiments, which not only proved the relative weight of the lungs and the body to be altogether uncertain and variable, but that the proportions laid down by Plocquet were sometimes even reversed. But, notwithstanding the great uncertainty of this test, it would be wrong to reject it altogether, but to use it amongst others as giving an approximative value which in some cases might be useful.

Daniel, about the year 1780, published another method, which has its foundation on two well-known principles of hydrostatics; first, that if a solid body is immersed in a fluid, it displaces as much of that fluid as is equal to the space occupied by its bulk; secondly, if a solid body is placed in a fluid of less specific gravity than itself, it loses in its own weight the weight of the volume of fluid displaced, which is equal in bulk to the solid body, and the weight of the fluid is increased in the same proportion. Daniel proposed to ascertain numerically the bulk of the lungs, then to weigh them in the air and in water. After having separated the lungs from the heart, as beforementioned, they were suspended at the end of a delicate balance in a state of equilibrium, and then immersed in a graduated vessel filled with water and sufficiently deep; the bulk of water displaced is equal to the bulk of the lungs. If the lungs belonged to a fœtus which had breathed, and therefore could not sink, they were to be placed in a basket of silver wire, of which the bulk is known, so as to make a proportionate deduction from the quantity of water displaced. Thus, suppose we take the weight of the lungs of a still-born fœtus as one hundred in the open air, they will lose but a small portion of their weight when weighed in water, since their bulk is but small, we may suppose they will then weigh only seventy. If the lungs of an infant which has breathed weigh as two hundred in the open air, they will lose a much more considerable portion of their weight when weighed in water, since they are of a much greater bulk, and consequently displace a much larger quantity of water, we may suppose they will then weigh only one hundred and forty. If, on the other hand, the lungs of a still-born fœtus have been inflated, we may suppose their weight in the open air to be as ninety-eight (for it is a remarkable fact that the lungs of a still-born fœtus weigh invariably heavier before inflation than afterwards), they will lose in the water as much as those which have been dilated by respiration, since their bulk is the same, their weight will then be only as thirty-eight; from whence it will follow that the difference of weight in the air and in the water will be in the following proportions:—

For the lungs of a still-born fœtus as 30.

For those of a fœtus which has breathed as 60.

For those of one which has been inflated always 60.

From these data it would be easy to construct tables which would give the weight of the lungs in air and in water, and at once ascertain whether they belonged to a still-born fœtus, or to one which had breathed, or to one of which the lungs had been inflated.

This process is founded on the principles of physics, which are incontestably true, the immutable laws of nature, but unfortunately the

bulk and weight of the lungs vary so much, that no certain result can be obtained; in addition to which the relative numbers are altogether incorrect, and the necessary tables, for the application of the rules, have never been made out, so that, in the actual state of science, it is utterly impossible to have recourse to such a method.

Dr. Brent, of Vienna, has proposed a somewhat similar method of ascertaining this important point. This consists in having a cylindrical vessel, not of an arbitrary or uncertain, but of a standard, measure, three inches in diameter and twelve inches in depth, to be placed on a frame, which, by means of a screw, might be at all times made perfectly level. Into this two pounds of distilled water are to be introduced, the height of which is to be marked with a circular line; from this circle are to be drawn three vertical lines, marked from left to right with the Roman numerals of vij., viij., and ix. to correspond with the uterine ages of seven, eight, or nine months. Each of these lines is to be subdivided into two equal parts, marked from left to right with the letters F for female and M for male. The lungs of six fœtuses are then to be introduced, three male and three female, delivered on the seventh, eighth, and nine months of pregnancy. It must be ascertained that respiration has not taken place. The experiment is then to be conducted in the following manner:—the change in the height of the water is to be marked by transverse lines on each column, and these lines to be distinguished by a Zero (o), indicating there has been no respiration. The next process is to be conducted in the same manner with six other similar lungs of male and female fœtuses, of seven, eight, and nine months, where the respiration has been imperfect, and each column to be marked in the same manner as before, with the initial letter I as *imperfect*. A third experiment is then to be instituted, similar to the preceding ones, in which respiration has been complete, the transverse lines to be marked with the letter C, signifying "complete." In all these experiments the lungs are not to be separated from the heart. I will not detain you by entering more at length into the utility of this instrument, which, however perfect in itself, yet as a standard rule to go by is exposed to precisely the same objections as in the other tests proposed by Ploucquet and Daniel, namely, that fœtuses of the same age and of the same sex vary both in bulk and in weight, and, like the tests, can only be used as an approximating test, therefore of but little value.

In pursuing the investigation of this subject I shall not enter into an examination of the size of the liver, or the state of the bladder or intestines, because they prove nothing. The emission of urine and the discharge of the meconium may take place before respiration, and their retention is not incompatible with it.

As the confined space of one lecture is not sufficient to complete the subject, we will here break off, and postpone the further consideration of it for our next meeting, when I trust to be able to communicate to you all the information requisite on a subject so deeply interesting and important.

Reviews.

The Gums, with late Discoveries on their Structure, Growth, Connexion, Diseases, and Sympathies. By George Waite, M.R.C.S.L. 12mo. pp. 160. Longman. 1835.

Dental Surgery, like ocular and aural, is coming into the hands of regularly educated practitioners, "a consummation devoutly to be wished." The author of this little work is a medical man, though practising, we should presume, as a dentist only. We agree with him in the following sentiment, expressed in the preface. "To those persons who make the teeth their principal study, I would recommend an intimate knowledge of the pathology of our frame; this alone will guide them in the diseases of the teeth, and teach them whether such are congenital, inflammatory, or sympathetic with other affections." Mr. Waite appears to be fairly acquainted with the anatomical structures of the gums and the adjacent parts; these he has, we think, detailed too minutely—for the general reader, and not sufficiently full for the profession. We know not for which it was written,—for the latter we imagine. At page 10, he says, when endeavouring to prove that the diseases of the teeth are often secondary to primary disease in the gum, the periosteum being the intervening as well as the uniting medium; "as it (periosteum) derives vessels from the gums, it must necessarily be acted on by all causes which produce a diseased state of those organs; when, therefore, the gums swell, the swelling produces a singular effect on the teeth,—they become raised from their original position, &c." In another part we are told that the loss of the teeth is attributable, in the first place, to constitutional derangement causing disease of the gums, and this acting upon the teeth. A synopsis is given, showing the manifold ills which arise from disease of the gums. Here we think Mr. Waite oversteps the boundary of fair induction. That diseased gums may and do very frequently affect the

teeth we ourselves have seen; and that abscesses in the alveoli may excite irritation in various organs of the body, disturb the nervous system, the digestive, &c., is equally tenable; but we cannot assent to the opinion of the author in the extensiveness of this principle. Dr. Ashburner tried to convince us of the fact, but he failed. Nevertheless, the facts adduced by Mr. Waite are before us. We recommend to the profession as well as to the general reader an attentive perusal of Mr. Waite's little book: it contains many valuable practical observations.

A Manual of Aphorisms in Chemistry, the Chemico-Pharmaceutical Preparations and Decompositions of the London Pharmacopœia, and Toxicology for the Use of Students preparing for Apothecaries' Hall, and Junior Practitioners in Medicine. By Robert Venables, A.M., M.B.

This little work contains much valuable information; its author has evidently taken much pains in abbreviating those subjects which are not altogether essential to the medical student, and given a more copious account of those, which are not only useful to the student, but which every practitioner ought to possess at his fingers' ends. The toxicological part of this work (for a condensed account) is excellent; the author has not crammed its pages with every subject, but confined himself principally to the different branches of one science, and we feel pleasure in being able to recommend to practitioners as well as students such a work as the present, for it will at all times refresh the memories of those who at once possessed its knowledge, and give to those, who are preparing for their examination, an easy method of explaining the different chemical phenomena on which it treats. The student, however, must recollect, that works of this description are not intended for him to understand the sciences of chemistry, toxicology, &c., but merely to refresh his memory, after he has gained his information from more elaborate works, and on this principle alone do we recommend Manuals like the present.

EXAMINATIONS AT THE COLLEGE OF SURGEONS AND APOTHECARIES' HALL.

Frequently have we been asked, what kind of examinations do they give both at the College of Surgeons and Apothecaries' Hall. We have now an opportunity of presenting to our readers a list of questions given to the same gentlemen at both these called formidable societies. The questions undoubtedly differ in every examination, yet nevertheless it will give to those preparing for these ordeals, some slight idea of the examination they are about to undergo, and shew them that it requires nothing more than common industry to become licentiates or members of each.

COLLEGE OF SURGEONS.

What are the bones which enter into the formation of the leg and foot?

Give me the articulating surfaces of the bones of the tarsus?

Why is the superior articulating surface of the astragalus broader on its anterior part than on its posterior?

What are the ligaments of the foot?

Describe the attachments of the internal or deltoid ligament?

Give me the relative position of the muscles on the posterior part of the leg?

Describe the attachments of those muscles?

How do their tendons pass with regard to each other when they have arrived at the lower end of the tibia?

Describe to me the ligaments of the ankle joint?

What are the appendages of the eye?

Give me the attachments of the orbicularis palpebrarum?

Is it tendinous or fleshy externally?

What is the situation of the lachrymal gland?

How many nerves supply the orbit?

Enumerate the membranes of the eye?

Describe the formation of the chambers of the eye?

How is the capsule of the lens formed?

What arteries supply the iris with blood?

What are the general causes of fistula lachrymalis?

Describe the course of the nasal duct?

Enumerate the different operations necessary for the removal of this inconvenience?

What bone would you perforate in performing this operation providing you could not penetrate the duct?

What would you do in case of abscess of the antrum?

Supposing you had extracted the second molar tooth, and in its cavity had placed a piece of bougie, which had ascended into the antrum, what would be your treatment?

In how many directions can the shoulder-joint be displaced?

What would be your diagnosis of each?

What would be your first object in the reduction of a dislocation?

After you had made counter-extension, what would be your next object?

Supposing you were called to a person in whom the head of the humerus had been thrown downwards into the axilla, how should you ascertain its situation?

APOTHECARIES' HALL.

After a short translation of Gregory, Celsus, and physicians' prescriptions,

What is the use of the barometer?

What is the pressure of the atmosphere over every square inch of ground when the barometer stands at 30°?

Upon what principle is the barometer constructed?

For the barometer to sink one inch to what height is it necessary to ascend?

Is the pressure of the atmosphere always the same?

Upon what principle is the thermometer constructed?

In what way would you graduate the thermometer?

Why would you give mercury the preference?

What are the elementary gases?

How would you procure oxygen?

In how many proportions does oxygen unite with sulphur?

In how many proportions does it unite with nitrogen?

What are the medicinal acids?

What are the component parts of tartaric acid?

How do you procure acetic acid?

What are its component parts?

Which of the vegetable acids contain no hydrogen?

What are the component parts of oxalic acid?

How is the super-tartrate of potass procured?

What are the component parts of ammonia?

What are the metallic bases of the alkalies?

How do you procure potassium?

From what do you procure potass?

From what soda?

What are the hydracids?

How is Prussic acid obtained?

What are the component parts of cyanogen?

What would cyanogen be called in chemical language?

What is the carbonate of soda, chemically speaking?

In how many proportions does chlorine unite with mercury?

When the bisulphate of mercury is mixed with the chloride of sodium, what is the decomposition?

Which is the most soluble, the protochloride or bichloride of mercury?

What are balsams in general a compound of?

How is benzoic acid procured?

What is the composition of benzoic acid?

What are the vegetable fermentations?

What are the necessary conditions for the saccharine fermentation?

What change takes place in the vinous fermentation?

What is olefiant gas a compound of?

What are the compounds of carbon and hydrogen?

What is the temperature of the tepid bath?

What is blood heat?

In what fevers is the blood generally the warmest?

MATERIA MEDICA.

Barks.—Which of the barks contain the most quinine?

How is the sulphate of quinine obtained?

How much quinine is generally obtained from a pound of the cinchona cordifolia?

What are the medical properties of bark?

In what diseases is quinine generally administered?

From what principally is the muriate of ammonia obtained?

What are the component parts of muriate of ammonia?

Catechu.—From what tree is this extract procured?

To what does the catechu owe its properties?

What is the active principle of the colchicum?

What are the effects of colchicum on the system?

What are the preparations of colchicum as ordered in the Pharmacopœia?

What is the difference of strength between the acetum and vin. colchici?

Kino.—From what tree is this medicine procured?

What enters into the composition of the pulv. kino comp.?

How many grains contain a grain of opium?

Why would you not combine this medicine with alkalies?

In what diseases would you administer this medicine?

What is dysentery?

What are the general causes of dysentery?

Momordica Elaterium.—How is the extract prepared?

In what diseases would you administer it?

What would be your dose?

What are the principal causes of dropsy?

Opium.—How is opium prepared?

What are the active principles of opium?

How do you obtain morphia?

In what way would you separate the narcotine from the morphia?

What are the properties of opium?

What would be your dose as a sedative?

In what cases is opium particularly useful?

Suppose you were called to a person who had taken opium as a poison, what would be your treatment?

What are the best tests for opium?

In what preparations does the scilla maritima enter into the pharmacopœia?

What are the properties of squills?

From what plants, besides the laurus camphora, is camphor obtained?

What are the properties of scammony?

In what form is it generally prescribed?

What are the different species of worms?

In what parts of the alimentary canal are they generally found?

What are the properties of aloes?

In what cases should they not be administered?

What enters into the decoct. aloes comp. of the pharmacopœia?

Why is the potash used?

In what cases would you prescribe the decoct. aloes comp.?

What is the sulphate of iron, chemically speaking?

In making the mistura ferri comp., what precaution is necessary?

What is the class and order of digitalis?

What are its properties?

Supposing you had been prescribing, for some time, digitalis, and you found the patient suddenly sinking, what would you do?

Well, if you had discontinued the use of the medicine, and found your patient still remaining in a very low state, and you had kept him at the same time in the horizontal position in a state of perfect quietude, what would be your treatment?

What are the properties of belladonna?

To what part of the eye does the iris generally adhere?

What is the treatment of iritis?

What is the object in giving such large doses of mercury?

In serous inflammations, what is the fluid called that is secreted?

Give me the anatomy of the eye.

Suppose I was to pass a needle through the centre of the cornea, backwards, to the point where the optic nerve penetrated the sclerotic coat, what are the parts it would pass through?

Give me the origin and course of the optic nerves.

How is the brain supplied with blood?

From what artery does the vertebral arise?

What precautions are necessary in opening the jugular vein?

Which do you consider preferable, opening the jugular vein or temporal artery?

In what disease, particularly, would you open the jugular vein?

What are the veins of the arm?

Why would you not open the cephalic vein?

What are the symptoms of pneumonia?

What are its terminations?

How would you distinguish, by the stethoscope, an attack of pneumonia?

Supposing the inflammation had terminated

in suppuration, what would then be your stethoscopic signs?

What is the difference in the symptoms between pneumonia and pleuritis?

What would be your stethoscopic signs in pleuritis?

You speak of latent pleuritis,—how should you ascertain its existence without the stethoscope?

In pulmonary disease, what are the usual stethoscopic signs?

What is the effect of gin on the liver?

Supposing a person had drunk a large quantity of gin, and had died from diseased liver, what would be its pathological appearance?

What are the symptoms of peritonitis?

How would you treat peritonitis?

NEW OPERATION FOR THE RELIEF OF STRANGULATED INTESTINAL HERNIA.

At the meeting of the Westminster Hospital Medical Society, Dr. Weatherhead exhibited a new instrument for operating in cases of *intestinal* hernia when strangulated. Dr. Weatherhead premised by stating that it was the flatus pent up in the protruded gut, which was the *sole cause* preventing the return of the intestine; and, in proof of this he cited the undeniable fact that even when you return a reducible intestinal hernia, the first effect of the pressure is to empty the gut of the flatus it contained, by causing it to re-enter the abdomen, when the now collapsed bowel finds no difficulty in following it. Another substantial proof of the truth and correctness of his position, he considered, was the gurgling noise which *always preceded* the reduction of a strangulated intestinal hernia, produced, in fact, by the pressure of the taxis, having succeeded in causing the escape of the flatus through the abdominal apertures inwardly; and that, in reality, the usual operation of enlarging these apertures only facilitated the same object, that of allowing flatus to re-enter the abdomen, after which the emptied bowel found no further obstacle to its reduction.

Now, Dr. Weatherhead observed, if these views were correctly founded, it obviously would be as ready a mode to empty the intestine of flatus outwardly as inwardly, much more easy in its accomplishment, and requiring infinitely less skill in its performance, provided it could be done safely, and this he considered exceedingly feasible.

For this purpose, therefore, and on these principles, the Doctor has had his new instrument constructed. It is a very minute and neatly made trocar, the stilet of which is not larger than many acupuncture needles in use. With this he proposes that the gut should be perforated, and the air evacuated through the canula, repeating the operation should separate duplicatures of the intestine require it, having previously divided the skin with the point of a lancet, to facilitate the puncture.

Two questions naturally arise for consideration; firstly, would feculent matter afterwards escape through the puncture into the abdomen, or would inflammation ensue? Dr. Weatherhead, in answer to the first probable objection, stated that an artery of a considerable size can be perforated with an acupuncture needle, and yet no hæmorrhage shall follow; neither did he see cause, in regard to the second, to dread the supervention of inflammation from so slight a wound.

We leave it to our readers to decide the question, but it would certainly be difficult to deny the ingenuity, if not the feasibility, of the proposition, and recommend the matter more especially to the consideration of the operating surgeons of our public hospitals.

Reports of Societies.

LONDON MEDICAL SOCIETY.

Monday, November 24th, 1834.

W. Kingdon, Esq., in the Chair.

Principal speakers, Dr. Burne, Mr. Kingdon, Mr. Headland, Mr. Dendy, Mr. Linnecar, Mr. Greville Jones, Mr. Edward Leese, &c., &c., &c.

Dr. Burne drew the attention of the Society to pyrosis or waterbrash, a disease which, he remarked, was rather frequent among hospital and dispensary patients. He had been led to believe, from the results of many cases, that pyrosis was symptomatic of malignant disease, cancer, fungus hæmatodes, or of subacute or chronic inflammation of the sub-

mucous tissue. Formerly, under the use of the sub-nitrate of bismuth, the patients certainly appeared to be cured, but they almost invariably returned in from two to twelve months as bad as ever. Now, however, he had adopted a plan of treatment more consonant with his pathological views; he administered calomel and opium, in small doses, one grain of the former and a quarter of the latter, night and morning, carrying it gradually to salivation, which took place in about ten or fifteen days, when success attended his efforts. His views had not been confirmed by morbid anatomy, as he had not had proper opportunities. He had seen one case, however, of an old gentleman, where general thickening of the coats of the stomach attended this discharge or eructation of fluid. He would rather, with Andral, call this state of the sub-mucous tissue *pathological congestion*, not *hyperæmia*, which was physiological congestion, or congestion without disease of structure. He preferred this term to that of inflammation, which was likely to produce a false conception of the nature of the complaint. He considered the predisposing cause to be in most cases constipation of the bowels, and he had, in almost every instance, found that that state of the alimentary canal had continued for years previous to an attack of pyrosis. In addition to the use of calomel and opium, the diet should be properly regulated.

Several cases were narrated by the gentlemen present, some in confirmation of, others to refute, the Doctor's views. Some remarks were made as to the source of the fluid ejected, which Dr. Burne, Mr. Linnecar, and Mr. Leese, were inclined to think proceeded from the salivary glands, rather than from the stomach. One gentleman said he thought at one time it might come from the pancreas, but, in saying so, he forgot that the pancreatic duct opened into the duodenum, and consequently the pylorus would oppose the passage of the fluid into the stomach. Objections were made to the administration of calomel, admitting the disease to be dependent on inflammation of the sub-mucous tissue; but these were met by the statement, that the proto-chloride blanched the mucous tissue.

If we regard pyrosis in its proper light, we shall consider it as a symptom which may attend either disordered function or diseased structure, and consequently the treatment requisite in the latter case would be very improper in the former. Among the class of patients alluded to by Dr. Burne, it is possible that the structural alteration he describes obtains, as they are, generally speaking, spirit drinkers, but, as a general rule, the treatment is not applicable to cases of pyrosis in the higher classes.

REMINISCENCES OF A MEDICAL STUDENT.

Written in the last days of a Consumption.

It was my fate to be born of parents of wealthy prospects, but unfortunately those, like many others, were susceptible to the blight of different seasons. I was cherished by a fond mother, whose heart, as tender as her infant's soul, knew not till a period, alas! which I shall hereafter mention, that the Almighty made her, ah! and caused her offspring, too, to enter a world that was not free from cares and troubles, though she was adorned with every charm her fair sex could have been blessed with. It was then in the year 1806, in the month of March, when the howling winds destroyed the moaning groans of a mother at the time of my birth; and no sooner had I inhaled the air of life, than my little heart, as if aware of all the difficulties that would ensue, commenced to make my yet unrecognised soul pause ere it entered a frame in which it knew not a corner of repose. Then born and lying at a mother's breast without thought, without trouble, and without even knowing what a world I had entered, I slept as happy as if no grief had yet befallen my now powerless mother. In such blissful state of ignorance I continued till the year 1809, when, gentle reader, my thoughts became perceptible to my, believe, previous living soul. It was, as you may suppose, from something that penetrated the very recess of my heart to cause such an impression, and what I now style memory. My heart indeed trembles, when recalling the day of such catastrophe; as if but yesterday I see my afflicted parent parading the room in which I rested, with her before mild and placid countenance, as if changed by a shattered heart, in all the agonies of despair.

What could have been the cause of such grief, I was at a loss to know; my tongue, then not capable to fulfil the duties of the mind, was unable to communicate the desires of my soul. When at last I heard a word that appeared to me mournful, even from its sound, it was death, and that of my father too, though then I knew not the blessing of such a parent. "Oh! is he dead!" exclaimed my sensitive mother. "Do the doctors say he is no more?—what shall I do? and what will become of my darling infant?" The words death or dead I then knew not, but listening to the sobs and apparent rents of my mother's heart, and hearing her grief-fallen words exclaiming,—"Then, doctors, you cannot save him," conveyed to my little heart the feelings of my mother's. My comprehension every day became more perfect, the thought of doctor became as engrafted in my brain, and as soon as I was able to communicate to another of my fellow species my ideas, the thought still remained, and, though infant as I was, it became the over-balance of my after stronger mind. It was not, however, until I had completed my eighth year, that the importance of such a being became thoroughly instilled into me; for, till this period, I had enjoyed the friendship and kindness of one left parent, to whom I had always imparted my yet for the most part half-formed ideas, and who apparently had listened to them with a pleasure to the hereafter doings of her offspring. Even up to this period my mind was stuffed with jealousy for the knowledge of medical literature, and such a thing as ambition began to harass my yet quite innocent mind. The parent's pride was in her child; her funds, though scanty, were every year a portion saved for the education of her only hope; her mind, however, was always anxious, and the more so as she knew the little she possessed would be lost as soon as her feeble spark fled from her now almost withered frame.

At length the day approached, when one morning, roused from a slumbering sleep, I was told to hasten from my tottering couch to catch the last breath of an only and dear parent. As if conscious of the fatal night, my door was no sooner entered than horror struck my watchful soul, and in a moment I found myself by her side, when, with what pleasure I could hear a still murmuring breath; and what was my joy when, with a tremulous sigh, I heard from her deadly-looking lips the blessings to her child. I stared around, and beheld, to the right of her dying couch, a being, whose grey hairs bespoke his age, whose serenity of countenance and steadfast eye showed his anxious mind, whose watchfulness over every dying motion of my parent had prevented him from observing my approach, till lo! convulsive twitches like lightning passed over every portion of her frame; when, terrified by the growing paleness of her cheeks, I raised my watery eye, and saw him with the greatest tenderness place his fingers on her pulseless arm, and said, as if partaking of my grief, "My child, all powers have failed, thy mother is no more, she is gone to a more happy destination." He then left; I followed him to the door, my heart struggling with grief, the inner membranes of my eyelids tingling against the whiteness of my eye, and my tender frame almost exhausted by fatigue. What, in such a moment, could my thoughts have been? Left fatherless, motherless, and an only child, I flew back to my mother's couch; my mind, on reflection, was somewhat revigorated, believing there might be a man whose skill, if only for a few moments, could revive my lost mother. Then I exclaimed to myself, "Oh! if I did but understand the mechanism of your machine, then would I seek to replace thy now lost spark." No sooner had these ideas vanished from my mind, than, suppose my joy, when I beheld a gentle movement in her supposed dead frame, the elevators of her eyelids regained some power, and more, when a murmuring breath showed a movement in her breast, and, to my surprise, from her lips I could distinctly hear "My child! it is not gone." The powers of man are now useless, they cannot tell when death is come, and life has ceased to rewind the unwinded frame; a word or two more followed, but my startled mind prevented my ear from catching them. Her feeble arm then became partly stretched towards me, but, in an apparent effort to meet my hand, it dropped, and life went to return no more. I now remained motionless, and waited with anxiety to observe if once more I could observe a movement in her pallid countenance, but all to no purpose, for on her death-sunken cheeks were the smiles of heavenly bliss. Our

doctor, who had returned, knew not whether she was dead or in a trance, but remained by her afterwards for several hours. I was now, by our nurse, pestered to return to bed, but how was it possible I could leave when anguish overcame my dormant powers. I therefore remained in the room and watched every manœuvre of the medical man, but all fo purpose. From this time my mind became more fully impressed with the blessings of the cranial contents of a doctor, and, though but with trifling means, I determined to make progress for a medical career. Time passed away. I had now reached my twelfth year, and spent my time in studying the rudiments of the languages necessary for such an undertaking. My guardian, who had the command of the little funds possessed from inheritage, endeavoured, by repeated manœuvres, to abstract from my mind what he thought absurdities, by assuring me, that the idea of the medical profession was useless; in the first place, from an imperfect education; in the second, from what he termed natural stupidity; and in the third, which was in fact the most essential, the want of necessary funds. However, as young as I was, I heard of such a science as phrenology, although I could not call myself then a true disciple of such a noble study, I yet wished to ascertain if there was any bump, or bumps, that could inform me any thing of the future. After a long and attentive search, and studying every mark that had been pointed out by its founders, I found as many good as evil in my own formed cranium. But, nevertheless, as an orphan who was destitute of friends, who had no one in this wide world to whom he could comunicate his real feelings, and even when he did impart them, he was sneered at and despised. What, then, could have been my feelings under such circumstances, it is impossible to describe, though I may give a slight glance of what where the ideas which ruled and governed my then called headstrong disposition. I felt, though left protectless, as if there was a Being in whom I could always trust my confidence, and who still urged me on to persevere in my undertaking. My pretended guardian, whom I might well call a man with a rocky heart, found that he could not convert my ideas, yet he thought, from the tenderness of my age, he might decrease my ambition, and lessen what he termed my obstinacy. He therefore, without consulting my desire, much less thinking of the wretchedness I should suffer, took me, without a word, from the temporary school in which I was placed, and sent me instantly off to a school called a charity, where I was to be left friendless, and take up my abode amongst boys who had been descended from the lowest stations of life, and who knew not the feelings of one who had the blood of their superiors running through his veins. This, however, I was able to withstand; but when I found all my views were thwarted, and I had now arrived at that age, namely thirteen, when a boy is believed in general to have some rational thoughts, though, perhaps, not original, the persons to whom I was to look as superiors, knowing little more than a boy of ordinary talent of the age of ten, completely overpowered my feeble and harassed mind, which, owing to the constant state of anxiety, so far enfeebled my bodily frame, that I was scarcely able to follow up the common exertions of nature. My repugnance to associate with my companions, and my ardent thirst for knowledge, made me a complete outcast of those who were called my fellow-students, and raised me bitter enemies in those who were termed my teachers.

(*To be continued.*)

PRIZES OF THE ACADEMY OF SCIENCES.

The Academy offers a prize of 2000 francs for the best essay on the following subject:—"What is understood by the term *laryngeal phthisis?*—What are the organic changes, causes, species, termination, and treatment?"

The question for the Portal prize is,—"What influence has morbid anatomy exercised on medicine since the period of Morgagni to the present day?" The value of this prize is 200 francs. The essays must be sent to the Secretary of the Academy before 1st of March, 1835.

THE

London Medical and Surgical Journal.

Saturday, November 29, 1834.

PARLIAMENTARY EVIDENCE.

We resume the evidence of Dr. Elliotson. He recommends a certain standard of education for the Physicians, both general and medical, and that every man, having passed through this curriculum, no matter where, whether at Edinburgh, Cambridge, or Oxford, should be admitted to the Fellowship; that there should be no distinction whatever,—to institute a difference "would be most barbarous." Thinks that the whole of the statutes, which regulate the internal government of the College, require a revision; that the system of electing the "elects," and of the President out of these, is "barbarous, not at all calculated for the present age." When one of the most respectable Fellows of the College can apply and reiterate the appellation "barbarous" to the government of the College, there must be something rotten indeed in the senate house. There are, undoubtedly, abuses of the most flagrant nature, abuses which no denunciations from the press could ever correct, or even ameliorate; it must be achieved by a great legislative enactment. The Parliamentary Committee have the facts and the arguments before them, facts so astounding, arguments so potent, that no legislature, whether Whig or Tory, or however despotic it might be, could stem the stream of Reform in the present critical era, would dare not to eradicate such atrocious abuses. The more we examine the medical evidence, the more convinced we become of the injuries the College government is inflicting upon the Licentiates, upon the profession at large, aye, and upon the community. Dr. Wells was refused the honour (as it was thought) of admission into the Fellowship; why, forsooth! because he was a very irritable man. Dr. Elliotson thinks he was a superior man, perfectly eligible; but his works, his Philosophical Researches, performed with so much acuteness, are upon record, they alone affix a stigma on the College. Dr. E. is questioned as to the propriety of the President being empowered to nominate Licentiates to the Fellowship. He thinks it objectionable. His reasons are:—"In the first place, it must subject the President, I should think, to some embarrassment. He might be anxious to do his duty, and perhaps be very much beset by different interests; and, in the next place, I think it much better that a number of men should have the power of selecting than one. One may not be alive to all the merits of individuals, and may have his prepossessions." Dr. Elliotson should have spoken out boldly, he should have told the Committee in unequivocal terms, that the President would invariably select his friends, careless of their merits or demerits. He should have said, looking at the actions of men, even of those who occupy the highest stations in this realm, they act in this manner, and, reasoning thus, the conclusion would be inevitable. Dr. E. thinks that, under no circumstances, should the power of conferring degrees be given to the London University, or the King's College, or to any other School in London. We hope the Doctor will deliver the same opinion to the Council of the London University. "Why do you think the power of conferring medical degrees should not be vested in the College of Physicians?" "I think the College of Physicians, while it exists, ought to be above all bodies that grant degrees; that it ought to be able to stop any one that

has passed any other place without deserving it. At all Universities there are men who get through and obtain degrees without deserving them. This will happen, and the use of the College of Physicians is to check the Universities, to examine men a second time, and to make their qualification certain. I believe that, in many countries, the students first of all take their degrees in the respective Universities, but, before they practise, are obliged to present themselves to a supreme body for a second examination, and that, I conceive, is the purpose of the College of Physicians,"—that it should license none to practise except "Graduates from other places." It is well known, that the College of Physicians have no power to prevent any man practising medicine, unless he styles himself Doctor. The veriest quack may practise medicine with impunity, but if a man, who has received a thorough medical education, and graduated at an University, dares to style himself Doctor, and practise, he is liable to prosecution by the College. There is something so monstrous in this law, so dissonant to all human reason, that Dr. Elliotson cries out "the whole system wants reform." Reform will be had. The *present* system is no safeguard to the lives or the health of the public, it is worse than useless; nay, it is positively injurious. Dr. E., with many other witnesses, bears testimony to the inefficiency of the law that requires the "Censors" annually to inspect the drugs in the apothecaries' and druggists' shops, but which is confined to the city only, and then only a few shops are inspected, so that the College rely, we presume, on the honesty of the apothecaries and druggists elsewhere, but distrust those residing in the Society. Dr. E. is of opinion, that if graduates, from all Universities, and under the same regulations, were admitted into the College and the College governed by a Council or Committee, there would be more cordiality. He recommends one standard of education, and that to be raised, and all to be equally compelled to reach it.

Dr. Billing, Fellow of the College, and Physician to the London Hospital, examined:—He stated, after a few preliminary questions, that some time ago he had written to the Fellows individually, suggesting various alterations in the management of the College, and in the system of education and admission into the Fellowship. We shall not apologise for extracting, a tconsiderable length, from that letter:—

"1. That every member of the College shall, upon his first admission, be denominated Licentiate.

"2. That the age of admission be 24.

"3. That no Licentiate shall be balloted for as a Fellow until he has been seven years a Licentiate.

"4. That the examination for Licentiate, for those who aspire to become Fellows, shall be the same as has heretofore been for candidate, including examination in theGreek of Aretæus, Sophocles, and Thucydides, with the addition proposed by the Education Committee of a fourth examination in English.

"And that, previous to any of the present Licentiates being balloted for as Fellow, he shall be examined in Greek as above, except when admitted by the proposition of the President, according to the established custom, or to please the King, or for any equally good reason.

"5. That physicians who wish to obtain merely a licence from the College may be examined as Licentiates have hitherto been.

"When I heard that the Education Committee had proposed, and saw that the President supported, the proposition, to recognise men as physicians who were highly qualified, though not possessing the form of an M.D., I hailed it as a light of liberty breaking in; but immediately followed a resolution to draw more strictly the line of demarcation between

Fellows and Licentiates, at the moment of declaring that no degree at all is necessary to becoming a good physician, resolving to exclude from the College of Physicians the graduates of every university in the world, except Oxford and Cambridge.

"Physicians without university degrees will not be duly appreciated, unless they be eligible to the Fellowship; therefore I cannot think it just to highly educated Licentiates to have persons thrust amongst them who would be considered of an inferior grade, no more than I consider it just that they themselves should be excluded from being examined as candidates.

"From the torpor which has pervaded the Fellows of the College upon these subjects, I was not aware, until after I had broached my opinions at the penultimate comitia majora, that I should find such ready support, and that too amongst men not ignorant of the affairs of the College, several of more experience than myself, in the vigour of judgment, and who have studied the business. But why have they held back? Why do some of high talent and principles even absent themselves from the College altogether? Is it from despair? Is it from that feeling which made some of the most respectable in the College, both for standing, talents, and character, hold such language as this to me, 'I agree with you, but it is of no use, it is a rotten concern?' If there be a few rotten timbers in the good ship, let us overhaul and refit her; I can no longer hold back my opinion, as I have tacitly blamed and mistrusted others for doing so. Some years ago I might have feared to advocate change, (not to prejudge by calling it improvement,) lest I should have been mistaken for a disappointed malcontent; now I cannot be misunderstood, for were I not independent by inheritance, I am so by the success, beyond my expectations, which I have had in my profession, I do not with mock modesty say beyond my deserts, for no man who has worked so hard as I have done in his profession, for three and twenty years, but deserves success, though some, alas! are not so fortunate.

"In writing to my colleagues, to recommend a more liberal policy, I do not venture to dictate to them, nor even to require the adoption of my opinions, but beseech them, for our common interest and honour, to think on the subject, and to suggest some improvement. I respect the Licentiates, but it is not therefore alone that I would plead their cause; it is because I promised on joining the College that I would endeavour to promote its honour, which promise is unnecessary to the mind of one who feels he must be compromised in the disgrace of the body to which he belongs. My opinion is, that the College would be more powerful as a body, and thereby more useful to its members, as well as the public, if it enrolled the talent of the Licentiates. At present the College is weak; it has not power to protect its junior members; it has not power to punish the grossest quacks, I had almost said that it has only power to controul its own Fellows, but it has not even that, it has not power to expel a member who disgraces itself and himself.

"The College has not power to prevent men from practising without a licence. But it may be answered, we see that the more respectable physicians do become Licentiates; this, however, is not either from the value of the licence, towards gaining the confidence of the public, nor from any direct power of the College, but on account of one of its factitious props, which may not last. It is because the hospitals and dispensaries in general require of their physicians to be members of the College, which has doubtless prevented many men of talent from practising without licence, in defiance of the College.

"What more can be necessary than a thorough examination, and after seven years' acquaintance, the admission by ballot; the ballot is a test of the power of character; and when I speak of the eligibility of Oxford or Cambridge men, or others, as a right, it will still be subject to the ballot. In recommending that all members should be put at first into the same rank, that of Licentiate, I have no idea that the ballot would be used as a subterfuge for keeping back any deserving Licentiate, although he were not a member of one of the English Universities; nor do I contemplate the possibility of any one acceding to the recommendation with that impression.

"The subjection to a ballot exerts a salutary influence on the moral character of individuals, whereas our present plan has rather a baneful tendency, the effect of disabilities generally being to render persons less careful to preserve

a character, when they know it is not a certain passport to promotion; and the very limited admission of the Licentiates hitherto, does not by any means warrant them in relying on conduct and fitness alone, as sufficient to ensure their election to the Fellowship in any moderate time, calculating the ordinary duration of life. Let me not be misunderstood, I speak of the tendency of disabilities; not that I have observed any such actual effect to be produced; on the contrary, I have as much respect for the Licentiates generally, as for the Fellows. ARCHIBALD BILLING.

"*Bedford-place*, 23*rd Jan.* 1833."

ANATOMY BILL.

THAT the Anatomical Schools in this metropolis have not been supplied with subjects to the amount that they were last session, is a fact lamentably experienced by the Pupils, acknowledged by the Teachers, and regretted, we are convinced, by the Inspector of Anatomy. But is this an anomaly—a startling position? Ought it to be advanced against a bill which had for its primary, and, assuredly, its paramount object, the prevention of exhumation?—Unquestionably not! When that Bill was passed, we hailed it as the harbinger of a new era in anatomical science; and not only that, but as a means of removing one of the greatest stigmas which could be affixed to the character of the medical profession. We felt that "body-snatching" was at an end; that the public would no longer be harassed with the revolting and horrible reflection that the corpse of a relative or a friend would be molested, but that it would be permitted to crumble into earth, in the bowels of which it was first deposited. This *has been achieved*, and it was a great achievement. Those who were acquainted with the disgusting scenes of "resurrectioning," who had experienced the ills, horrors, and dangers which beset the teachers of anatomy prior to the passing of this Bill, in the procuring of bodies for their lectures, can justly estimate the advantage of the present system. That it does not "work well," may be fairly assumed by certain individuals. But to what cause or causes is this defectiveness in its operation to be attributed? We affirm, and we affirm it unhesitatingly, that it is attributable to the profession itself! We are sorry to advance such an accusation; we do it with reluctance. Let us not, however, do this without adducing proofs of such influence. We need not refer to the denunciation of a powerful and influential writer against the operation of the present law, the injurious tendency it must necessarily exert on an enlightened public, and on a liberal profession. Yet, in the evidence delivered by those examined before the Committee sitting on the Anatomy Bill, it was the universal cry,—We have to associate—we are compelled to do so—with men the most degraded in society—its very outcasts—the refuse of society. Something must be done. Gentlemen must no longer have for associates the basest of human kind. Give us any means for the procuring of bodies for dissection, for the teaching of anatomy, relieve us from the odious but now indispensable necessity of concerting with the greatest of villains, in violating the laws of our country, and the best feelings of our nature. The means is now afforded us; we differ but about its application. A writer in the *Morning Post* says, *such* is the way to accomplish the desired object! A learned Professor declaims against the said writer in loud, and, we regret to say, in not very measured language for his opinions and his inferences. We know not the surmised author, nor do we know the professor, except by reputation.

For such a man we cannot but feel sorrow, that he should have allowed his better judgment to be swayed by passion. His letter in our cotemporary is an enigma. The second may, perhaps, be more explicit and tangible. Our readers, however, will not suppose for a moment that we are wishful to break a lance with the said Professor. It is to the principle we refer,—to the best means of furnishing every school in this metropolis, and in every other metropolis, and every provincial town where anatomical schools exist, with subjects for the efficient teaching of anatomy. We shall refer again to this topic. It is one fraught with much interest, and when fairly discussed, as it will be in this Journal, will be perceived to be one of high potency to the profession and the public.

Foreign Medicine.

ACADEMIE DES SCIENCES.

Sitting October 28th, 1834.

Composition of Starch.

M. Guerin, in a letter, communicated to the Academy the result of some new experiments that he had been making on the composition of starch, by which he proved that there existed a portion of substance soluble in cold, and that this soluble substance was not, as many chemists had advanced, owing to the transformation that starch underwent by the action of boiling water.

Rain, accompanied by Showers of Toads and Frogs.

M. Flourens informed the Academy, that many interesting communications had of late been received on this curious phenomenon; the substance of which communications he would now read to them.

The first was in a letter from M. Huard; "I was (says this author) at Jouy in the month of June, 1830, and, whilst proceeding to church to baptise an infant, who was accompanied by its god-father, god-mother, and nurse, I was surprised by the fall of a sudden and violent shower of rain, particularly when I beheld, as if falling from the heavens, small animals, representing toads, some of which fell upon my umbrella. The ground around me, for the space of two hundred yards, was covered by a prodigious number of these small animals, the shower with which they fell lasting for about ten minutes, the drops of rain not being more numerous than the toads, some of which were in a state of tadpole."

The second communication was from M. Zichel, who stated, that in 1808, when Sub-Lieutenant to the 10th Regiment of Chasseurs, and near the walls of Burgos, he observed, during a tremendous storm, the descent of an immense number of small tadpoles from the clouds.

A third communication states, that, in the summer of 1794, M. L. Gayet, with a hundred and fifty men, stationed at this period in the village of Lalain, near the Abbey de Flines, the environs of which the Austrians had made in a state of deluge, to prevent the approach of the French soldiers from the city of Valenciennes. It was extremely warm, and dense vapours were observed to arise in columns from the inundated part. Suddenly, about three o'clock in the afternoon, such a violent storm came on, that the guards were obliged to issue from the cavern in which they were concealed, or else have been completely overwhelmed with water. Their astonishment was considerably augmented on observing fall to the earth numbers of toads and frogs, the size of a hazel nut. M. Gayet at first could not credit that they fell with the rain, consequently, to thoroughly convince himself of the fact, he extended his handkerchief, and got his fellow-comrades to hold the opposite ends, which in a short time received a considerable number of these animals, some in a state of tadpole.

M. Duparique added the fourth communication. "On the last Sunday in the month of August in 1804, after many weeks of heat and dryness, on one most suffocating day from the intense heat, the village of Fremar, about four leagues from Amiens, was visited with a tremendous storm. At the time (says M. Duparique) I was staying with the clergyman of the parish, we were passing a small meadow, which separated the church from the parsonage, and in a moment, from the violence of the storm, were almost inundated, and I was

greatly astonished to observe, in a moment, my garments covered with small frogs. The venerable old clergyman, who observed my astonishment, said 'It is raining toads, but this is not the first time I have observed this phenomenon;' numbers of these small reptiles were leaping about the ground. On our arrival at the parsonage we discovered that one of the windows had been left open, and the floor of this room was deluged with water, and on the floor numbers of those frogs were observed. I believe most of them to have been frogs, in consequence of the beautiful streaks on their backs and the white variegated marks on their stomachs, also from the manner in which they leaped about."

M. Duparique afterwards entered briefly into what he supposed to be the cause of this phenomenon. He agreed in the opinion, which more than once had been advanced, viz. that these animals had been carried from the surface of the earth, by some whirlwind, and probably a portion of sea water.

Cephalopoda.

M. de Ferussac presented a memoir on two species of the cephalopoda, as yet but little known; also on the species of calmen and cranchie, and on a very remarkable new kind of each of these two species.

The first of these species, says the author in a letter which accompanied his memoir, has at length made known to us this curious genus, which has been seen only in a mutilated state from the accidental loss of its two tentacular arms, which are as thin as packthread, and about two inches and a half in length, though the animal was scarcely four inches in length. It is difficult to understand the transmission of movement to the extremities of these curious organs. The second species belong to the class cranchie, and it is the only decapoda which presents large membranes uniting the six superior legs. Its magnificent colours and singular form render it very remarkable.

M. de Ferussac sent two beautiful plates, representing the two species he has described in his memoir.

Foreign Hospital Reports.

HÔTEL DIEU.

Extirpation of the Superior Maxillary Palatine, and Right Malar Bone, for Osteo-Sarcoma.

W. G. a tarrass maker, ætat. 50, of good constitution, states for the last ten years he has been the subject of blennorrhagia, and for the last four months suffered from vague rheumatismal pains, which continued to harass him for about six weeks. The cause of the disease he could not in any way explain, but frequently when at work suffered from pains in the right cheek. About two months ago he first felt darting pains in the right side of the face, which at times extended from the temple to the forehead. These pains gradually increased, and he was admitted into the Salle Sainte Agnés of this hospital, under M. Breschet.

At first the seat and character of these pains caused a suspicion of disease of the suborbital and facial nerves. The patient was bled, and a blister applied to the back of the neck, from which, for a few days, he experienced slight relief, but in the space of eight days the pains returned as violently as before. On a more attentive examination, a small round hard tumour was observed, occupying the canine fossa of this side, which from pressure was extremely painful. The internal parts of the mouth were healthy. The right nasal cavity was obstructed, and through which even the air passed with difficulty, and occasionally there was a slight purulent mucous discharge from it. From this time it was evident that the disease was produced by a tumour, which had become developed in the antrum, and the pains, which were observed to follow the course of the suborbital nerve, were owing to compression of this nerve.

There was some difficulty in ascertaining the nature of the tumour, and during the time the surgeon was forming his diagnosis, he merely alleviated the pains by means of opiates. However the pains became more acute, the tumour increased in size, became less resistent, without presenting the least fluctuation. The posterior and right portion of the palatine crest became soft, and projected towards the mouth.

An operation was now considered as the only means of alleviating the patient, and the next day the operation was performed by M. Robert in the following way. Not feeling certain as to the nature of the tumour, a puncture was made into it, opposite the canine fossa, a large portion of the anterior wall of the antrum was next raised, to see whether it was a fibrous tumour, or polypous production that might be

thus extracted. These attempts being useless, extirpation of the superior maxillary bone was found necessary. The patient, however, was previously seated, with his head leaning against the chest of an assistant who was behind him; the superior lip of the patient was raised, and a bistoury plunged perpendicularly into the most prominent part of the tumour, from which no discharge issued. The incision was next increased in the transverse direction, and the indicator finger introduced into the cavity of the sinus, which was discovered to be completely filled with hard friable vegetations of a cancerous nature. MM. Sanson, Josse d'Amiens, Rinel, Grand Champ, repeated this exploration, all of whom agreed as to the nature of the affection.

An incision of about six inches was now made, directed obliquely from the right commissure of the mouth to within a short distance of the ear of the same side. By this incision the external maxillary and transverse fascial arteries were divided, but immediately secured by means of torsion. The zygomatic arch, malar bone, and inferior edge of the orbit were next laid bare, and a sudden scream from the patient informed the operator that he had divided the suborbital nerve, the artery accompanying this nerve was also secured. The temporal aponeurosis, and the superior insertion of the masseter muscle, together with the surrounding soft parts, were then detached from about the zygoma, in order to make a section of this bone. He then divided the bone with the saw recently invented by MM. Thompson and Charriére, and this instrument appeared to lessen much the time of the operation.

The ascending process of the superior maxillary bone, and the internal wall of the orbit and palatine vault, still remained to be divided. To effect this, the operator raised and detached the flap from the superior maxillary bone to its junction with the internal angle of the eye. The posterior border of the wing of the nose was afterwards separated from the anterior nasal opening, and the superior lip detached from the alveolar arch. The ascending process of the superior maxillary bone was afterwards broken by means of a pair of pincers, and the orbito-nasal partition was easily divided. The *scie à molletts* was then placed between the two middle front teeth, and it instantly penetrated between the maxillary bones. The chisel was then used as a lever in separating the maxillary and palate bones.

The tumour was now only slightly fixed posteriorly, and it was easily moved in almost every direction. The sub-orbital nerve was now observed, and separated close to the furrow in which it is, to some extent, lodged. The vault of the palate was afterwards detached, and the posterior part of the palatine arch rendered smooth by the bistoury.

The operator now extracted the tumour, by dividing the soft parts which still retained it with scissors. A large cavity was now exposed, bounded internally by the vomer and other appendages of the nasal partition, below by the tongue, above by the globe of the eye, and posteriorly by the soft palate and pterigoid processes. Above and external to these processes there still remained some tissue affected with this cancerous degenerescence, which was destroyed by the actual cautery.

After the lapse of a few seconds, no hæmorrhage supervening, the superior flap was reapplied, the external wound closed, and the parts retained in apposition by means of the twisted suture.

The tumour on being examined was found to occupy the whole of the superior maxillary, the palate, and malar bones. The whole cavity of the maxillary sinus was filled by an encephaloid cancer. Not the slightest trace of osseous tissue could be detected in the tuberosity of the maxillary bone, neither in the palate nor malar bones, but these parts consisted of an homogeneous substance, resembling that found in the antrum.

Three hours after the operation a slight hæmorrhage supervened, and the patient lost about eight ounces of blood; the bleeding orifices were easily constringed by the injection of cold water on the bleeding parts. For the first two days slight febrile symptoms ensued, accompanied with trifling pain in the head, and there was some swelling about the incised parts. On the third day the pain in the head had increased, but the febrile symptoms had nearly subsided.

By the fourth day the parts had so nearly cicatrised, that the superior needles were taken out; the pain in the head much less, the right side of the face somewhat swollen.

By the tenth day the patient was able to walk about, all the parts had nearly cicatrised, and he appeared almost fit to leave the hospital.

British Hospital Reports.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL,

CHANDOS-STREET.

Purulent Ophthalmia.

Case I.—Michael Buckley, æt. one month, was admitted, Jan. 14th, with purulent ophthalmia of both eyes. The disease has existed three weeks. The eyelids are not much swollen, but the discharge is very profuse from both eyes. The corneæ are very much thickened and opaque, and vision in either seems doubtful. The left eye is the best. Has not been under medical care.—Applic. ung. argent. nitrat. sing. ocul. Lotio aluminis sæpe in die utend.

℞. Ol. ricini, ʒj. h. s. s.

15th. Much the same; discharge very profuse. Pergat.

16th. Discharge lessened.

30th. Has had the solut. argent. nitrat. applied regularly three times a-week. The child has now quite recovered, and has good vision.

Case II.—Elizabeth Cleaver, æt. five weeks, admitted, March 22, with purulent ophthalmia. The disease commenced a week after birth with profuse discharge, which has greatly increased within the last three days; the lids are greatly tumefied, and very vascular internally; the cornea of either eye is clearer than usual in this disease. Has not had any medical treatment.—App. ung. nigr. sing. ocul. Servetur lotio alumin., sumat ol. ricin. ℥j. h. s.

23rd. The discharge is lessened, and the child can open her eyes.—Rep. ung. et lotio.

25th.—The discharge seems to be diminishing.—Rep.

27th. Does not attend regularly, and the cure does not advance as rapidly as it should; the discharge is still considerable, but the corneæ continue clear.—Pergat.

30th. The lotion is used daily, and the ointment duly applied. There is not any discharge now, and the corneæ are perfectly transparent.—App. gutt. arg. nitrat. pro re natâ.

April.—Dismissed cured.

Interstitial Abscess.

Henry Lee, ætat. 11, was admitted Jan. 11th. Has been subject to frequent attacks of inflammation in each eye; the present is of fourteen days' duration, but has been much worse within the last five days. There is a varicose state of the vessels of the upper lid, general conjunctival inflammation of the eye, with muddiness in the cornea, and an appearance in the centre, as if an interstitial abscess was forming; bowels regular; intolerance of light; pain in the head and orbit. Applic. c. c. ad ℥iv., templ. sinist.

℞. Hyd. submur. gr. ij., conf. q. s. fiat pil., 6tis horis sumenda.

12th. Can bear the light now without that degree of pain it formerly caused; is much better; vascularity diminished, and the pustule on the cornea not increased; pain in the head and orbit lessened.—Rep. pil.

13th. Ulceration of cornea over the abscess commencing; intolerance of light much lessened, and pain decreased, both in the eye and in the head; conjunctival inflammation less, and the cornea is not so muddy.—Hyd. submur. gr. ij. bis. die.

16th. Mouth slightly affected; ulcer superficial, small, and healthy; inflammation less, and no pain.—Omitte hyd. submur.

℞. Pulv. jalap. comp. ℥ss.—App. gutt. arg. nit. (gr. viij. ad ℥j.)

18th. Inflammation of conjunctiva greater.—App. hirud. iij., rep. pulv. purgant. et gutt. arg. nit.

20th. Inflammation of the conjunctiva still considerable; the leeches were not applied near enough to the eye; ulcer healthy; pain of the eye not increased, but complains of headach.—App. c. c. ad ℥iij. templ. dextr.

℞. Hyd. submur. gr. j. 6tis horis sumend.

23rd. There is not much improvement since the last visit; pustule not increased, and the insterstitial deposit is not in greater quantity; the conjunctival inflammation continues considerable.—App. ung. arg. nit.

℞. Hyd. subm. gr. ij. 6tis horis sumend.

27th. The improvement is very great since he has taken the larger dose of calomel; cornea clear, except where the interstitial deposit was, and there an ulcer exists.—Cont. pil., app. gutt. arg. nit.

Feb. 1st. Eye better; cornea clearer; ulcer healthy: interstitial deposit almost wholly absorbed.—Cont. pil. et gutt.

3rd. Continues to improve.—Pergat.

5th. Ulcer healing: omit the hyd. subm.—Habeat quinæ sulph. gr. ij. bis die.

8th. Much improved; ulcer smaller.—Rep. pil. et guttæ.

15th. Cured and discharged.

CHARING-CROSS HOSPITAL.

Hydrophobia.

A boy about 18 years of age, of middling stature, and rather thin make, was admitted into this hospital, Nov. 20th, 1834, about 3, P.M., under Mr. Pettigrew, with well-marked symptoms of hydrophobia. The previous history of the case was somewhat obscure, at least as to the origin of the disease. It appears that he had a favourite dog, which he used to fondle much, and to kiss, and that, about two months ago, this animal showed symptoms which were afterwards attributed to rabies. While in this state, he bit a cat belonging to the house, and shortly after disappeared. The cat bit a kitten, and died in a neighbour's house; the kitten remained alive and well, but a week previous to the commencement of the boy's complaint, he was playing with it, and was scratched in the right hand. To this cause his friends refer the complaint, certainly a very improbable origin; it is much more likely that while fondling and kissing the dog, some of its saliva found its way to a cut, scratch, or other injury he may have had at the time, or else may have passed into his mouth unawares.

The most distressing symptoms were the violent convulsive action and agitation into which he was thrown whenever he was exposed to a current of air, even breathing on him produced a most painful paroxysm; the imbibition of fluids did not affect so much, and he could swallow portions of an orange, although it required a great and evidently a painful effort to do so. The tobacco was employed in the form of enema, five grains to half a pint, and repeated several times in the course of the treatment. It appeared to produce some alleviation of the distress, but the boy died at 11, A.M., on the 21st. The autopsy did not disclose any cause for death.

APOTHECARIES' HALL.

Names of Gentlemen to whom the Court of Examiners granted Certificates of Qualification on Thursday, November 20th:—Isaac Bycrley, Liverpool; George Varah, Sheffield; Frederick James Chapple, Stonehouse, Devon; Charles Redwood Vachell, Cardiff; James Berry, Bristol; James Newton Heale, ———; Jabez Carr, Birmingham; William Jones, ———; James Taylor, ———.

MISCELLANY OF FACTS.

Degrees Confirmed.—Cambridge, Nov. 19—Licentiates in Physic—Richard Wellesley Rothman, M.A., Fellow of Trinity College, and Robert Spear, Caius College. Bachelor of Physic—George Budd, Fellow of Caius College.

Vacancies by Resignation, &c.—Mr. E. Willmore, Surgeon to the Worcester Dispensary; Dr. Jas. Malden, Physician to the same Institution; House Apothecary to the Bury (Lancashire) Dispensary.

Friday (yesterday) se'nnight a public dinner was given to Mr. R. Liston, in Edinburgh, preparatory to his departure for London, to enter upon his duties as surgeon to the North London Hospital. The dinner was given in the Hopetown Arms, and about 300 gentlemen sat down to the entertainment. They were of all shades in politics, and the heads of both branches of the profession attended to do honour to their old colleague. The Lord Provost took the chair, on his right sat Mr. Liston, on his left the Earl of Buchan.

The case so long pending between the University of Glasgow, and the Faculty of Physicians and Surgeons, the point at issue being whether the University could grant a degree of Master in Surgery, entitling the holder to practise, independent of the privileges of the Faculty of Surgeons and Physicians, has been finally decided by the Scotch Court of Session. The inferior Court had decided in 1815, that the degree of M.D. gave no title to practise within the bounds of the Faculty's charter. Next year the University commenced granting a new degree, *Chirurgiæ Magister*, the possessors of which commenced practising surgery, without reference to the Faculty, and this right was that lately disputed. The decision of the Judges of Session was given against the University. As the case is important, we may go into it more fully next week.

APPOINTMENTS.

Naval.—Surgeon C. D. Browning, M.D. (1817), to the Actæon. Assist.-Surgeon W. Durie (1830), to the same ship.

Military.—Staff Assist.-Surgeon Robert Smith to be assistant-surgeon to the 21st Foot, in place of Horatio Nelson Holden, placed on half-pay. Surgeon J. Pickering, M.D., to be surgeon to the Forces. R. Hopkins, M.D., to be assist.-surgeon to the Forces, v. Smith, appointed to the 21st Foot.

General.—Mr. John Taylor, of Huddersfield, resident apothecary to the London University Hospital. Mr. R. Baker, of Leeds, surgeon, superintendant of factories in Mr. Rickard's district. Dr. J. H. Norris, physician to the Freston Dispensary. Mr. F. Row, surgeon to the Devonport and Stoneham Dispensary. Dr. M'Gusty, surgeon and physician to the Slane (Co. Meath) Dispensary.

DEATHS.

Dr. R. Freston, of Whitcomb, formerly of Terceira. At Malta, John Shewer, Esq., of the Medical Staff. Mr. Mathew White, surgeon, of Newcastle. Mr. H. Holmes, assistant-surgeon R.N. (1825), Magnificent. Dr. H. Ainslie, of Hall Garth, in Over Kellett. Assistant-Surgeon James Damerum, late of the Staff at Quebec, drowned by the upsetting of a boat off Southend. Assistant-Surgeon J. Lowry (*b*), R.N., on board the Castor, of cholera. At Madeira, Dr. Wm. Henderson, late of Bury, in Lancashire. Mr. John Marshall, surgeon, of Willington, Yorkshire.

WEEKLY BILL OF MORTALITY.

London, Tuesday, Nov. 18, 1834

Abscess	6	Inflammation of the Bowels & Stomach	8
Age and Debility	44	Inflammation of the Brain	2
Apoplexy	10	Inflammation of the Lungs and Pleura	10
Asthma	20	Insanity	7
Cancer	2	Jaundice	2
Childbirth	7	Liver, Diseased	5
Consumption	81	Measles	13
Convulsions	43	Miscarriage	2
Croup	3	Mortification	8
Dentition, or Teething	6	Paralysis	5
Dropsy	20	Scrofula	1
Dropsy on the Brain	19	Small Pox	5
Dropsy on the Chest	3	Spasms	3
Fever	13	Thrush	1
Fever, Scarlet	16	Unknown Causes	9
Fever, Typhus	1		
Heart, Diseased	1	Stillborn	18
Hooping-Cough	11		
Inflammation	23		

Males 204 Females 230 Total 434

Increase in Burials reported this week 93

LITERARY INTELLIGENCE.

Dr. PRICHARD's new Work on Insanity and other Disorders of the Mind, accompanied with numerous cases exemplifying various descriptions of Madness, is in the press.

An Introductory Lecture, intended as a Recommendation to a more careful Investigation of the Constitutional Origin of Local Diseases, &c. Delivered at the Finsbury Dispensary by GEORGE MACILWAIN, Surgeon to that Institution.

The present lecture is partially an endeavour to show the utility of a knowledge of therapeutical agents in the treatment of surgical diseases; but an introductory lecture cannot well be reviewed. It does much credit to the author's abilities, and must have been very gratifying to his pupils.

METEOROLOGICAL JOURNAL.

MONTH. Nov., 1834.	Moon.	Thermom.			Barometer.		De Luc's Hygrometer.		Winds.		Atmospheric Variations		
20		35	43	35	29·81	29·63	78	75	E.N.E.	E.	Fine	Fine	Fine
21		39	45	38	29·57	29·69	75	80	E.	E.	Rain	Showry.	Cloudy
22		45	48	43	29·53	29·57	80	80	E.N.E	N.N.E.	——	Cloudy	Showry
23		45	46	38	29·82	29·85	80	81	N.N.E.	N.E.	Fine	Fine	Fine
24	☽	43	47	43	29·90	29·86	81	76	N.E.	N.E.	——	——	——
25		44	47	38	29·66	29·66	76	76	E.	E.N.E.	——	——	——
26		40	41	35	29·63	29·63	76	77	N.N.W.	N.N.W.	——	——	——

50, *High Holborn.* WILLIAM HARRIS and Co.

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THE

London Medical and Surgical Journal.

No. 149. SATURDAY, DECEMBER 6, 1834. Vol. VI.

LECTURES ON PHYSIOLOGY AND PATHOLOGY, OR THE INSTITUTES OF MEDICINE,

DELIVERED BY

DR. GRAVES, M.R.I.A.,

At the Meath Hospital, or County of Dublin Infirmary, Session 1834–1835,

On Monday, 3rd November, 1834.

INTRODUCTORY LECTURE.

Gentlemen,—The course of lectures it is my duty to deliver includes *physiology*, or the study of the structure, mechanism, and functions of the human body in health; *pathology*, which treats of the symptoms of diseases during life, and the morbid appearances detected after death; and *general therapeutics*, which refer to the general indications for the exhibition of remedies, and the best means of administering them.

This course, named the *Institutes, or Theory of Medicine*, comprises within its limits the whole of what may be termed the scientific part of medicine and surgery, and includes the consideration of various subjects of the utmost importance, not only to the physician but the philosopher. Endowed with reason man alone seems capable of understanding to a certain degree the construction of his own body, the uses and functions of its various parts, and is the only animal that has attempted the problem of explaining himself. All animals are indeed placed within the influence of numerous agents capable of deranging their health, but man alone has considered the causes of disease, and sought to avert its fatal consequences by the suggestions of reflection and experience. Wonderfully and fearfully made, our bodies composed of matter, in itself inanimate, are governed, during health, by the laws of vitality, and each particle obeys an influence always different from, often opposed to, that which presides over the same particles when placed beyond the sphere of the living agency; yet so beautifully perfect is the structure of our bodies, that we are unconscious of the struggle, constantly maintained in every member and in every organ, between the conflicting laws of animate and inanimate matter. When life ceases the latter instantly resume their sway, and death is the commencement of a change which soon destroys the shape and texture of each part, and dissolves the mortal mass into a few simple elements. To investigate the form and structure of the living body, to examine the functions of each organ, their mutual connexion, and their various uses in supporting this conflict between life and death, is the proper business of the physiologist. His attention must be directed not only to man, considered as a whole, but to each individual organ and its structure, traced to as great a degree of minuteness as can be accomplished with certainty. He must also endeavour to ascertain of what elementary principles these parts are ultimately composed; he must examine the mechanism of each organ, and accurately study its functions, not only in man but in other animals. Comparative anatomy * has indeed become indispensable to the physiologist, a name which no one can now claim who has not studied this accessory science, and that not superficially, but with perseverance and labour; for general views of structure, striking analogies between organs, and instructive illustrations of function do not become visible to the comparative anatomist, until painfully and tediously climbing he reaches an elevation whence the most distant objects, that lie scattered over the wide kingdom of nature, can be seen at one view, and he is thus enabled to compare the near with the remote, separate what had been previously classed together, and collect into the same group what before had appeared distinct.

Ardently engaged in studying the laws of those functions, by which life is carried on, begun, or continued from one generation to another, the physiologist seeks illustrations of his favourite pursuit, in every living object

* Among the moderns, Haller and John Hunter, but particularly the latter, have the credit of first applying an extensive knowledge of comparative anatomy to the improvement of physiology. The immortal Harvey used it extensively in investigating the circulation.

that presents itself to his observation. He travels nowhere without meeting something worthy of his attention, for it may be truly said, that most parts of this world are dwelling places of living creatures, and that we can scarcely find a spot uninhabited by beings endowed with life. We find it in the air, in the waters, in the eternal snows of the arctic regions, and burning sands of the torrid zone. We find it near the summits of the loftiest mountains, and in the deepest caverns; even mephitic pools, poisonous soils, and boiling springs teem with animals and plants, adapted to the peculiar circumstances in which they are placed, and furnished with an organisation wisely contrived for their preservation. As this forms a subject well worthy of the consideration of every thinking mind, and furnishes abundant proofs, I had almost said of the ubiquity of the Creator's animated works, I shall select a few examples in proof of the assertion just made.

In the warmer regions of the earth, where copious exhalations arise from rivers, swamps, and impenetrable forests, the insect inhabitants of the air swarm in such myriads, that they seem to the tortured traveller to fill the whole atmosphere, and, at certain seasons of the year, their attacks become so troublesome and so incessant, that they force whole tribes of people to save themselves by a temporary migration *.

Even in the higher northern latitudes, the heat of the summer solstice calls to a short-lived existence swarms of mosquitoes, from which the Esquimaux, the Laplander, and the Samoied are forced to protect themselves by keeping their huts constantly filled with smoke. How far the upper regions of the atmosphere may be peopled has not been ascertained, but it seems improbable that winged insects exist to any great distance above the highest flight of the swallow and swift, although wanderers from the plains are occasionally met with at considerable heights on mountains. Thus, in traversing the highest accessible regions of the Alps and Pyrenees, I have met with flights of butterflies, the emblems of summer and of sunshine, migrating from some neighbouring valley, and, in their fluttering and devious course, almost touching with their fragile wings the hard surface of the glacier and never-melting snow, the types of cold and of winter †.

De Luc, Ramond, Saussure, and Humboldt have all seen insects at heights equal to, or even exceeding, that of the summit of Mont Blanc. Of all animals the condor, or enormous vulture of the Andes, attains to the greatest elevation, for Humboldt saw it describing with expanded wings its aërial circles far above the highest peak of Chimborazo, where the barometer would have sunk below ten inches. The ocean seems to mark the boundary of that part of the atmosphere which is inhabited by winged insects, whose larvæ cannot find the necessary shelter and rest in its disturbed and unfathomable waters. But the depths of the ocean itself are not therefore untenanted; the waters everywhere teem with life, both vegetable and animal. Between the tropics the mariner, leaning over the side of his vessel, watches with interest the motions of the various species which every where swim around, and sees with pleasure the flying fish glancing through the air, where it is forced by its numerous pursuers to seek a momentary refuge. In the West Indian seas, where the water is extremely clear, and its depth but small, he beholds on the bottom a thousand varieties of sea-worms, star-fish, snails, and muscles, besides fish in prodigious numbers, and, as he sails along the surface of the water, he passes over whole groves of luxuriant fuci and other marine plants, together with immense masses of gorgonias, corallines, and alcyonias. He observes too with delight sponges, which, as large as shrubs, present the most beautiful play of colours to the eye, and, as they softly undulate with the motion of the waves, produce the pleasing illusion of his traversing fields covered with a profusion of flowers.

In other regions, notwithstanding the rapid course of his ship through the water, the navigator day after day beholds the ocean all around thickly covered with luxuriant sea-weeds, which, floating on the surface loose and unattached, grow without roots, and, to the inexperienced, convey the idea of rocks and shallows, dangers still far distant *.

Were we to seek an illustration of infinity in point of number, we would find it in those shoals of cods, herrings, pilchards, or sprats, whose moving and almost solid masses occupy many leagues. Even in the colder regions, and within the Arctic circle, the bosom of the ocean is scarcely less prolific of life. In some places, indeed, Captain Scoresby observed its waters tinged brown, as by a species of minute animalcula, which seeking light and heat near the surface, formed a living stratum not more than a few feet in thickness, but which covered a vast extent of the sea near the coasts of Greenland. Captain Parry, while engaged in his bold attempt to reach the North Pole, observed that the little pools formed by the

* Humboldt relates this fact.

† Ramond (*Voyages au Mont Perdu*, a work replete with original views and new facts) in climbing a very dangerous precipice, arrived at a spot where both advance and retreat seemed impossible. In this painful and hazardous situation the appearance of a fly awakened a curious reflection. "Durant cette inaction qui devenait d'autant plus penible qu'elle se prolongeait davantage, la mouche apiforme vint se poser auprès de moi et nettoyer ses petites ailes dont nous étions réduits à envier la puissance!"

* The immense tract of sea, covered by floating fuci, has been spoken of by many authors, and especially by Humboldt, *Relation Historique du Voyage.*

action of the sun on the surface of the snow and ice were full of animalcules.

On the coast of Greenland and other Arctic countries, the snow which covers mountains and valleys, and whose surface scarcely yields to the influence of the solar rays at midsummer, is in some places reddened* for miles together by a minute species of alga, which grows in vast quantity in the substance of the snow.

The infinity of animal life is exemplified in the most striking manner by a consideration of the *Infusoria*, an accurate and satisfactory account of which the student will find in a little work, illustrated by plates, lately published by Mr. Prichard, called the Natural History of Animalcules.

"The bare knowledge that there are myriads of atoms existing in a single drop of water, recreating and executing all their functions and evolutions with as much rapidity and apparent facility as if the range afforded to them was as boundless as the ocean, must carry with it an intensity of interest to the mind of every human being; of every one, at least, who is at all accustomed to meditate on the perfections of Nature, and to recognise and adore the hand which guides her through all the vast variety of her stupendous operations." * * * "Until Dr. Ehrenberg adopted the expedient of introducing vegetable colouring matter into the fluid which supplies them with food, an experiment attended with the most successful results, these creatnres were commonly supposed to be entirely devoid of internal organisation, and to be nourished by the simple process of cuticular absorption. By the application of coloured substances, which, moreover, have been found to invigorate rather than to depress the animalcule, and to maintain it in the full exercise of all its functions, this erroneous notion is set at rest, and an internal structure has been discerned in some, equal to, if not surpassing many of the larger invertebrated animals, and comprising a muscular, a nervous, and, in all probability, a vascular system, all wonderfully contrived for the performance of their respective offices."

He who has attentively watched the motions of these living atoms in a single drop of water, as displayed by the oxy-hydrogen microscope, must feel impressed with the conviction that their motions are voluntary, and that, like their fellow-animalcule—man, their lives exhibit a mingled scene of pain and enjoyment. Their extreme minuteness, as judged of by our feeble senses, does not prevent them from having a multiplicity of organs for their use, probably as perfect as in much larger animals. In the *Vorticella rotatoria*, or common wheel animalcule, which varies in size from one-thirtieth to one-four hundredth part of an inch, nerves and nervous ganglions, organs of mastication, deglutition and digestion, sexual organs, *and a pair of eyes* have been distinctly seen and described, besides a very complicated apparatus, by means of which its peculiar rotatory motions are performed. Baker relates the following curious observation concerning a minute hair-like animalcule discovered in prodigious numbers in a ditch near Norwich. "A large cohering cluster of them was put into a jar of water, when one part went down to the bottom, whilst the other continued floating on the top. All things remained for some time in this condition, until at last each swarm of animalcules grew weary of its situation, and had a mind to change its quarters. Both armies, in short, began their march at the same time against the side of the jar, and as one proceeded upwards and the other downwards, after some hours they were nearly meeting about the midway. The desire to know in what manner they would behave on this occasion engaged the observer to watch them with a careful eye; and, as they approached still nearer, he beheld, to his great surprise, the army that was marching upwards open to the right and to the left, and leave a convenient space for the army which was marching downwards to pass between its wings. Thus, without confusion or intermixture, each held on its way, the army which was going upwards marching in two columns to the top, and the other proceeding in great regularity and order in one column to the bottom. This amusing spectacle serves to show that, however mean or contemptible these creatures may appear to us, the Almighty Power that created them has not left them destitute of sagacity to associate together, and act unanimously for the benefit of the community, both these armies marching as regularly as if under the direction of wise leaders."

In Africa, particularly in the neighbourhood of the Egyptian pyramids, the heat is so intense, and the sand appears so parched and burned, that it seems impossible for either

* The redness of this snow, depending upon the presence of a minute alga, Protococcus nivalis, must be carefully distinguished from the red colour which Captain Parry observed on certain occasions, where the feet of his men or the bottoms of the sledges left impressions on the snow. This phenomenon was probably caused by a certain degree of transparency, which the surface-snow possessed in consequence of having been previously melted, and which allowed the transmission of the red rays alone through the parts forming the edges of the footsteps and sledge-tracks. The great obliquity of the sun's rays in so high a latitude favoured the production of this effect. No adequate explanation is given in the published account of Captain Parry's attempt to reach the North Pole over the ice. A most interesting paper, written by Count Xavier de Maistre, on the Colour of the Atmosphere and Deep Water, suggested this explanation. Vide Jameson's New Philosophical Journal, July, 1833.

plant or animal to find sustenance, and yet Hasselquist found both here, viz.—the Chondrilla juncea, a small species of lizard, and lion ants innumerable. Scheuchzer and Pallas both observed plants and animals in sulphureous springs. Forskal, in Arabia, Barrow, at the Cape of Good Hope, and Hooker, in Iceland, found different species of conferva and ulva growing in boiling springs. The most remarkable account of vegetation at a very high temperature is mentioned in Staunton's account of Lord Macartney's embassy to China. They found, at the Island of Amsterdam, a spring, the mud of which, hotter than boiling water, gave birth to a species of marchantia. The Turbo thermalis, a shell fish indigenous in the Adriatic, is found also in the thermal springs of Abano, at a temperature of 120°.

Soils abounding in metallic impregnations are generally found to be very unfavourable to the development of vegetable life; and among these the refuse of lead mines is one of the most remarkable for its sterility, a quality which makes it an extremely valuable substitute for gravel in making walks through fields and gardens, as has been done by my friend, the Rev. Dr. MacDonnell, at Dalkey; and yet, even in this soil, which is so peculiarly poisonous to most plants, the Arenaria verna grows with luxuriance. Sir Joseph Banks made an attempt to raise it in his garden; but, before he could succeed, he was obliged to send to the mines for a quantity of its native lead rubbish, which, having been put into a pit made for that purpose, soon became covered with this plant, although every effort to make it thrive in other soils, not adulterated by this metallic impregnation, had proved utterly unsuccessful. Covered with the Arenaria verna this patch appeared as fertile as any other part of the garden; but had not the seeds of this plant been procurable, that soil would have remained incurably barren and unproductive of any other known plant. Some soils, however, are composed of materials which the most long-continued exposure to atmospheric influences seems unable to prepare for the sustenance of vegetable life. In 1828, I had an opportunity of observing a striking illustration of this fact in Auvergne, "where several of the conical mountains, produced by volcanic eruptions of a date prior to the Christian era, have their sides still naked and destitute of the slightest trace of vegetation. The interior of their broken craters rugged, black, and scorified, as well as the rocky floods of lava with which they have loaded the plains, have a freshness of aspect, such as the products of fire alone could have preserved so long, and offer a striking picture of the operations of this element in all its most terrible energy; and indeed some of the streams of lava near Chamont are as fresh in their aspect as those which have flowed in Italy within the memory of man."—*Quarterly Review*, No. 72, p. 456.

In addition it may be stated that I observed others of these extinct volcanoes covered with a thick sod of luxuriant herbage even to the very bottom of the craters. It not unfrequently happens, that of two volcanic cones, touching each other at their bases, the one is perfectly bare and destitute of vegetation, while the other affords a sweet and abundant pasturage. This phenomenon struck me very forcibly, and indicates a chemical difference in the ejected matters worthy of further investigation.

Nothing can be more singular than the unaccountable manner in which plants spring up on certain occasions. Thus after the great fire of London in 1666, the whole surface of the devasted city was in a short time covered with a luxuriant crop of the *Sisymbrium irio*, in such profusion, that it was calculated that the whole of the rest of Europe did not contain so many specimens of this plant.

Again, wherever a salt spring breaks out at a distance from the sea, its vicinity immediately abounds with salt plants, although none grew there before. When lakes are drained, a new kind of vegetation springs up. Thus when the Danish island of Zealand was drained, Vilny observed *Carex cyperoides* springing up, although that species is naturally not a native of Denmark, but a native of the north of Germany.

M'Kenzie, in his North American tour, speaking of the country bordering on Slave Lake, says, "it is covered with large trees of spruce pine and white birch; when these are destroyed poplars succeed though none were before to be seen." Evelyn notices a fact very similar to this, which he observed in England, in Nova Scotia, and the United States of America, where fires have destroyed the original wood, the new saplings which spring up are generally different species of trees.

But life is not limited to the surface of the earth. Thousands of worms, snails, slugs, and the larvæ of many insects, form a subterraneous population which live for the most part concealed from observation, but come forth at stated intervals in quest of food. Even caverns which had no previous communication with the open air, have been found when opened to contain living vegetable matter. Thus Humboldt saw in a cave just opened at Mugzendorf, the beautiful stalactites covered with Lichen tophicola.

But the physiologist is not contented with merely considering the present population of the kingdom of life; the eye of rational curiosity turning retrospectively on the past, discovers a scene still more astonishing, and, if possible, more instructive; for we find that the living beings which have existed within the historical era, are as nothing compared with the countless millions which age after age had tenanted the world, long before man appeared on its surface.

"Measuring time as man does, in the minute manner suited to his wants and conveni-

ences, a few thousand revolutions of the earth in its orbit appear to him to him to comprise a period so considerable, that he feels it difficult to conceive that great lapse of time which geology teaches us has been necessary to produce the present condition of the earth's surface, *and which, when we even take some great astronomical period as an unit, we still find it impossible to express* *."

Let us then for a moment turn from the *present* to the *past*, from what *is*, to what *has been*, from the *living* to the *dead*, and we shall find the remains of living beings still more universally disseminated, and with a providence most worthy of admiration, even the *relics* of death converted into habitations for life, and contributing materially to enrich the scenery, and increase the fertility and extent of the dry land. When we reflect how many islands, and mountains, and what a large portion of continents is formed of secondary limestone, in many cases almost entirely composed of organic remains, we must yield to animals of ages long gone by the merit of forming vast tracts of country, eminent for the fertility of its soil, and the utility of its rocks both in agriculture and the arts.

When we behold coral reefs and islands raised from the depths of the ocean, through the agency of successive generations of animalcules, whose hordes, united by some common impulse, all contributed to rear after a fixed plan the mighty structure, which, firmly rooted in the deep, defies the raging of the elements, affording shelter and an habitation to various animals, we must—to beings so small and so simply organised, that they occupy the lowest rank of animal existence, to such beings must we concede the merit of structures, compared with which the most magnificent piles raised by human labour shrink into insignificance.

When we consider that, at the bottom of vast lakes, the *cases* or *deserted shells*, in which dwelt the larva of a minute species of insect called *Indusia tubulata* (the *caddis-worm* of fishermen), accumulated in process of time in such immense quantities as, on a subsequent revolution of the earth, to supply solid strata, supporting not only extensive plains, but constituting the sides of deep valleys, and the tabular summits of lofty mountains †, we must admit that these apparently insignificant creatures have left behind them a memorial of their existence, which, far more permanent than the boasted monuments of man, has resisted the dilapidating hand of time, and, although torn and convulsed, has not been annihilated by the impetuosity of the flood, or the shock of the earthquake.

By giving birth to new strata, while they overwhelmed and dislocated the old, volcanoes have left indelible and awful marks of a power at once destructive and creative, nor has the action of water been less energetic in modifying the surface of our globe, as is proved by the number and extent of formations and strata produced by an accumulation of marine depositions, but now elevated to the height of eight or ten thousand feet above the present level of the sea. Such convulsions, by resuscitating fires long slumbering in the bowels of the earth, or by calling forth the mighty deluge of waters, have wrought indeed great and wonderful effects, but have scarcely produced more extensive alterations on the surface of our planet, than have been effected by the slower but unceasing agency of living beings. The philosopher who reflects on these things is inspired not merely with wonder, but with awe, seeing that, in traversing the earth, the very rocks which support his footsteps are the tombs of myriads once alive, and finding with amazement the globe we inhabit encrusted, as it were, with a vast cemetery, the records of whose dead are still extant, and may be deciphered by a patient study of the characters inscribed on the strata that contain them.

Had each successive change in the physical state of the earth, its atmosphere, and its waters, been effected tranquilly, then had the corresponding alterations thereby produced in its plants and animals been indelibly recorded in the strata of each period, and the study of geology would have disclosed the history of by-gone ages arranged in exact chronological order. Such has not been the fate of our planet. Its era of change has not been always one of quiet transition. The force which upheaved, deep from beneath the superincumbent strata, the granitic summits of the Alps, has scattered the fragments of their burst and broken masses over the plains of France, Lombardy, and Suabia, in the centre of which their colossal pinnacles themselves proclaim the resistless energy that wrought the catastrophe, where, overtopping the confused heaps of surrounding mountain ruins, they stand like shattered pillars, attesting at once the powers of the Architect and of the Destroyer.

Although portions of the surface of the globe have from time to time undergone violent revolutions, still age after age of quiescence must have been necessary for the formation of those massive and extensive depositions, consisting almost entirely of organic remains, that occur in the secondary limestone and in the contiguous strata so widely diffused over Great Britain and the Continent. In the examination of these remains, the labours of the naturalist, combined with those of the physiologist, have attained results the most brilliant and instructive, and have enabled us to ascertain that the greater portion of Europe lay once beneath the surface of a shallow sea of estuaries or of lakes, whose expanse, abounding in islands and surrounded by low and marshy lands, covered with a vegetation more than tropical, we are enabled

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* De la Beche's Geological Researches, p. 397.

† See Scrope's Geology of Central France.

to repeople with swarms of huge amphibious monsters, belonging to species and genera now extinct, but which, then enjoying the fresh existence of a new creation, disported in the still tepid waters, or basked in the sun's red rays, transmitted with difficulty through an atmosphere loaded with carbonic acid and warm aqueous vapour, and therefore totally unfitted for the respiration of man, his fellow mammalia, or of birds, but still sufficiently pure to be adapted for the support of invertebrated animals, fish, and reptiles. The physiologist, in studying the remains of this era, recognises the wisest adaptation of animals to the circumstances in which they were placed, and dwells with admiration on a world teeming with life at a time that the calcareous precipitate formed in the water tended gradually to purify the air, and render it capable of supporting creatures of a higher order, while it enveloped the remains of those then in existence in such a manner as to preserve them perfect for our inspection. The vast beds then forming under water, were in after ages to be elevated, and become fertile tracts of country, fitted for the reception of man, for whose use the dry land of that era was not unproductive, nor was the vegetation, then so luxuriant, destined to disappear and decay unused. The tree-ferns and lofty palms, that waved in the damp and warm wind, where the highest levels of the still submerged Europe protruded above the surface of the waters, the luxuriant growth of those giant equiseta and reeds, which fringed the lakes, and afforded a lurking place to the enormous ichthyosauros, and to the fierce tribe of crocodiles and alligators, whose few surviving species, a comparatively scanty and feeble remnant, now infest the waters of the Nile, the Ganges, and the Orinoko; the numberless varieties of mosses, charæ, and other aquatic plants, which clothed the marshes and stagnant waters with their verdure; those primæval forests, whose depths were tangled by various species of climbers, which twined with rapid growth among trees whose stems they embraced in their gigantic coils; all these various species of vegetation continued unchecked for ages, and seemed doomed to moulder and decay unprofitably for man, then uncreated.

But behold, a change has come over the scene, and all those accumulated stores of vegetable matter have disappeared without being destroyed, for now, deep beneath the surface of the earth, they lie compressed and carbonised, forming immense * strata of coals, in which they are preserved, as by a miracle, from further change, so that thousands of years afterwards, when raised by the industrious hands of civilised man, the stony mass burns with a flame as bright, and a heat more intense, than can be obtained from the combustion of recent wood.

Had time permitted, it was my intention, gentlemen, to have spoken of the great advantages which comparative anatomy has conferred on physiology; at present, however, I find that I must limit myself to a single illustration of the great additional interest with which we view our physiological inquiries, when we find that the inferences drawn from the study of the human body and its functions may be often extended to other animals, and even to plants; a circumstance calculated to excite the physiologist to persevere in his observations and experiments, in the hopes of throwing light not only on the structure and vital actions of man, but of the whole tribe of animated beings. Thus when we examine the function of respiration in man, we become aware of certain changes produced in the air which has been breathed, and we observe that one of the constituents of the air has disappeared, while its place is occupied by another gas. The part thus used in respiration, we soon discover to be actually necessary for the support of that function, for when it is exhausted, or much diminished in quantity, the air is vitiated, and life soon ceases.

Now what an additional interest this single and insulated fact receives, when further observations have extended it into a law equally applicable to the respiration of all animals and plants. What a stimulus to exertion must the reflection prove, that our discoveries are not limited to man alone, but extend throughout the whole animal and vegetable kingdom. Inspired with fresh zeal, the physiologist now examines the respiratory organs in birds, fishes, insects, and plants, and every where observes the same effects produced by organs the most different, but in all cases displaying a wonderful adaptation to the general structure of the being and the peculiar nature of the medium in which it lives.

He finds the bird respiring with ease during its rapid flight through the air. He finds the fish breathing under water, and the worm under ground. When he walks abroad in the fields, he finds that the breath of life issues from every leaf of each tree and plant that adorn the scene; he becomes conscious that every living thing derives its vital principle from a common source, and, feeling a sympathy with all around, he refers with gratitude to the First Great Cause, whose laws govern the whole kingdom of animated nature, and he returns to his chamber a wiser and a better man.

The physiologist, from considering the structure and functions of the different orders of animals, at last arrives at a variety of species, which in many respects approximate to plants, and subsist without heart, brain, or

* What an accumulation of vegetable matter it required to form the coal fields of England, is attested by the fact, that at the present enormous rate of consumption the coal will not be exhausted before thirteen hundred years.—Vide *Malthebrun's Geography.*

nerves. On the other hand, the botanist observes many plants which, endowed with a degree of locomotion and sensibility to stimuli, seem to approach the limits of the animal kingdom. The investigations of the chemist confirm this analogy, and displaying the animal and vegetable kingdoms still more closely joined together, supplies another link of the chain which unites the various ranks of living beings. But chemistry does not stop here, for from this science issues a light still more brilliant, revealing to us, in the most striking manner, the simplicity of the means employed by the Creator in the construction of the earth and all it contains; for we find that the very principles, used in the formation of animate, constitute also the base of inanimate matter, and consequently the infinite variety of animals and plants, which throng with life air, earth, and water, together with the solid basis of the earth itself, its plains, its mountains, and its seas, are all composed of ultimate principles, so few in number, that specimens of all might be easily contained together within a nutshell. Nor can the physiologist confine his admiration of the Deity to the display of his power on this earth, although manifested on a scale so stupendous. No, his imagination, nay, his reason, will carry him still farther, even into the utmost verge of space; for when he reflects what an influence gravity, light, heat, and electricity exert upon living beings, and how intimately the two latter appear to be combined with the very existence of the vital principle, when he finds that every system in the universe is subject to the laws of gravity, when he observes that, though gifted with a speed almost exceeding that of the imagination, even light itself cannot escape into a region where it may wander disobedient to the laws impressed on it at the commencement of its flight, when he finds heat and electricity every where borne on its wings, when he reflects on all these things, he can scarcely avoid inferring the *ubiquity of life* *.

* For a very interesting recital of all the instances hitherto ascertained concerning animals and plants living in a medium possessing very high temperatures, I must refer the reader to Dr. Hodgkin's and Dr. Fisher's translation of Edwards's celebrated work on the Influence of Physical Agents on Life. —Appendix, p. 465.

LECTURES

ON

MIDWIFERY & THE DISEASES OF WOMEN AND CHILDREN,

BY EDWARD RIGBY, M.D., F.L.S.,

ASSISTANT PHYSICIAN-ACCOUCHEUR TO THE GENERAL LYING-IN HOSPITAL.

Delivered at St. Thomas's Hospital.

LECTURE X.

Cancer of the Uterus, continued—Polypus Uteri.

Gentlemen,—In my last lecture I endeavoured to describe to you the symptoms which characterise the presence and progress of cancer uteri. With regard to the treatment of this disease, we cannot hope to cure; our chief aim must be to prevent the formation of the disease, or, when formed, to retard its progress as much as possible.

The commencement of scirrhus is so insidious, that we can rarely succeed in effecting our first object, being seldom called upon to ascertain the nature of the complaint before a considerable degree of disorganisation has taken place. Where, however, we have the opportunity of examining the patient at this early period, we generally find that she complains of a deep-seated, and occasionally, throbbing, or even shooting, pain in the centre of the pelvis, sometimes extending to the groins, at others to the upper part of the sacrum or lumbar region; that the pain comes on at irregular intervals, and is of irregular duration, sometimes coming on with no assignable cause, but most frequently excited by the passage of solid fæces through the rectum, or by any sudden exertion or concussion. The vagina will be found healthy at this period, except that, perhaps, its mucous secretion may be slightly increased; but the cervix uteri is swollen and tender, its heat frequently increased, and communicating a distinct pulsation from the excited state of the circulation in the part. The lips of the os uteri are also swollen, and, at this stage, rather contract the entrance to the womb. With all this, she occasionally has the white creamy discharge, which, as I have already told you, is secreted chiefly, if not entirely, from the glands of the cervix.

The general treatment of this discharge I have discussed under the head Leucorrhœa; but I am particularly anxious to impress upon you the great importance of applying leeches *directly* to the os and cervix uteri in those cases, for it is one of the most powerful means of removing a diseased action, which, otherwise, defies our utmost exertions. Where the digestive organs are much deranged, I think it necessary to restore their tone by mild alteratives and tonics, although Sir C. M. Clarke

has rather disapproved of their use, as tending to increase the force of the circulation; but it has always seemed to me, that so long as the stomach and bowels are deranged, and the liver torpid, a large quantity of blood, which, in a state of health, would be required to supply the secretions of these organs, is now sent to other parts; and, moreover, the very state of derangement in these organs is of itself a source of irritation to the uterine system; and I cannot help thinking, that attention to these points, especially the stomach and liver, has rendered the uterine symptoms much more manageable, and certainly greatly added to the patient's general health and comfort. The bowels should be kept open, so as not only to ensure an evacuation twice in the twenty-four hours, but that the feculent mass should be as nearly fluid as possible, in order to prevent its causing pain and irritation when passing through the rectum. For this purpose saline laxatives are necessary, especially as they also unload the vessels of the adjacent parts, and thus act as a topical depletion. Mild doses of the sulphate of magnesia, or soda, or phosphate of soda, largely diluted, will be very beneficial; and if the stomach be irritable, either of the sulphates may be advantageously combined with a few drops of diluted sulphuric acid. Astringent injections here must be carefully avoided; our object is to keep up the secretion of the parts—not to stop it; and hence it is why we find, in these cases, that where an astringent injection has been ordered, from the practitioner having taken a false view of the case, the discharge is suddenly stopped, and the pain, heat, and irritation, greatly increased; and hence, also, the valuable fact, that so long as the discharge continues tolerably abundant the symptoms rarely become very severe. The vagina should be well syringed with warm water two or three times a-day, and the bleeding from the leeches encouraged as much as possible by the same means. The diet should be mild, easy of digestion, and unirritating; she should preserve the horizontal posture as much as possible, and avoid every thing both in diet and regimen which may tend to excite the circulation in the smallest degree. The same mode of treatment must be had recourse to when the disease is more fully formed, and the structure of the os and cervix uteri changed into that of scirrhus.

If discharges of blood should take place, the patient must be kept in an horizontal posture, and the case attentively watched. If the quantity of the discharge should be moderate, it should be recollected that it is the effect of the increased action, and of the fulness of the vessels of the neighbouring parts which may be carried off by it. It ought not, therefore, to be hastily checked; but if the quantity of blood lost should be so considerable as to be immediately hazardous, or to lay the foundation of future danger, it should be restrained by the usual means employed for the restriction of hæmorrhage, such as the application of cold and local astringents to the parts *.

Some peculiar views respecting the nature and treatment of cancer have been published by Mr. Carmichael of Dublin, and, although they may not be entirely tenable, still, as they serve to throw some light upon this disease, I will state them to you as briefly as I can. He considers that cancer, like the hydatid, is a parasitical growth, enjoying an independent animal existence in the body where it is formed. His proofs of this are—"1st. The substance of cancer closely resembles the gelatinous texture of zoophytes: it is in a manner insulated, receives no blood-vessels as a part of the body it subsists in, and whatever sensibility it may enjoy within itself, it conveys no impression of any outward stimulus to the sensorium of the person diseased. 2nd. It arises in parts endued with a small portion of life, or whose organisation is injured by violence, where a dissolution of organised matter takes place, but not so rapidly as to prevent its recomposition in another animalised form. 3rd. As long as it retains life throughout its substance, no ulceration takes place in the surrounding parts, as is also the case with the guinea-worm; but when a portion of it dies, the same effect is produced as by other extraneous bodies, and suppuration, with all its concomitant circumstances, is induced. 4th. It originates, like all incipient animals, in a point; in its substance it forms cysts containing a fluid, and evincing a contractile power like hydatids, an acknowledged animal. It has a tendency to improve its animality, and to assume the hydatid form and character. Like hydatids, it arises spontaneously and from accident. They are both destroyed by the same preparations; and if this happen in the womb, they are alike thrown off by pains resembling those of parturition. 5th. It is not infectious, nor spreads by contamination like other diseases, but increases by extending its roots in all directions. It propagates, shall I say, its *species*, by small pea-like substances connected by fibrillæ, each of them an incipient cancer, capable of emulating the parent in bulk and malignity; in this circumstance resembling the natural mode of generation in the class of zoophytes, and in other circumstances, as in the growth of the intersected roots after operation, bearing the closest analogy to the polypus, which it resembles not only in this artificial, but also in its natural mode of propagation †." Mr. Carmichael maintains, that where the vitality of a structure is weakened by taking on that indurated condition called scirrhus, it becomes peculiarly liable to terminate in carcinoma, although it occasionally admits of cure by resolution; that a healthy state of the blood, especially where it contains its full proportion of salts of iron, is incompatible with the life of a cancerous growth, and that there-

* Sir C. M. Clarke, on Diseases of Females

† Carmichael on Cancer.

fore his indication in giving preparations of iron, as nearly alike as possible to the form under which iron is found in the blood, is for the purpose of destroying the vitality of this parasitical growth, and thus completely rendering it a foreign or dead substance, to induce nature to attempt throwing it off by the process of sloughing, before it shall have attained such an extent as to make this incompatible with the preservation of life. Mr. Carmichael has used various preparations of iron, both externally and internally, and the result of his experience is to prefer the sub-oxyphosphate; he gives it in pills of five grains three times a-day, gradually increasing the quantity according to the symptoms and general health, and if there be any ulcerated surface, to which he can apply it, he covers it with the salt in fine powder. The general result of this treatment is an alleviation of the lancinating pains, and the separation of the carcinomatous structure, in the form of slough from the healthy parts.

I was lately induced to try this plan of treatment in a case of carcinoma uteri, which the kindness of my friend, Mr. Green, has placed under my care at St. Thomas's Hospital. The uterus is considerably enlarged, the cervix scarcely distinguishable from the general swelling of the organ, the os uteri forming a hard oblong fissure, between the edges of which I can barely insinuate the end of my finger; there was a fœtid grumous sanious discharge, and frequent attacks of intense lancinating pain, which had reduced her considerably; having premised a warm saturnine injection into the vagina and mild tonic for a few days, I ordered ℥ij. of ferri sulph. in ℥viij. of distilled water, and to throw up some of this, slightly warmed, into the vagina three times a-day; also vin. ferri ʒj. infus. quassiæ. aq. cinnam. āā ℥ij. ℿ ft. haustus ter in die sumend. Until this treatment had been commenced, opiates, under every variety of form and dose, had been employed with little or no effect in alleviating her sufferings; in a little time they began to abate in severity, and also in the frequency of their appearance; the appetite improved, and she felt much better in every respect. One remarkable change which followed the use of chalybeate medicines was that the discharge became almost immediately purulent, and lost that peculiar fœtid sanious character which it had before; it has continued so ever since, except on two or three occasions, when a portion of slough came away with a slight discharge of blood; there was so much improvement in the general health, that she was enabled to proceed to the use of the mist. ferri comp., and even to bear the application of four leeches to the os uteri with great relief; but, from the commencement of my seeing her, she was liable to attacks of profuse diarrhœa, which greatly reduced her. The case I need hardly say is hopeless, but the alleviation of her symptoms, and the remarkable and permanent alteration in the appearance of the discharge, are interesting and well worthy of your notice.

Where the stage of open carcinoma comes on, although cure is out of the question, we can still do much in the way of retarding the progress of the disease and alleviating the patient's sufferings; so long as the cervix uteri is not destroyed by ulceration, the occasional application of leeches to the part, if her strength can bear the depletion, will be of great service. In selecting the part for the external application of leeches, or cupping, we must be guided very much by the situation of the pain; the sacrum, the groins, or, if there has been any difficulty or pain in passing water, just above the pubes, are the parts usually fixed upon for this purpose, and the depletion must be proportioned to the severity of the symptoms. Opium is a common remedy which has been employed to dull the acute lancinating pains, but it deranges the bowels, and, although it may afford relief at first, it soon requires an increased dose to produce the same effects; this gradually goes on, until at last such a quantity becomes necessary, to procure even a temporary cessation to the patient's sufferings, that it can scarcely be taken without injury. Under these circumstances the conium, the belladonna, but especially the hyoscyamus, will be found most valuable remedies, and, when combined with small quantities of opium, will have a powerful effect in removing pain. I have known a patient, who could scarcely obtain even a temporary cessation to her sufferings by four grains of solid opium, experience complete relief merely from fifteen minims of laudanum combined with thirty of tinct. of hyoscyami, and for a much greater duration. In some instances a profuse spontaneous bleeding has arisen from some vessel, exposed by the ulceration, to the extent of producing syncope. The result of such a circumstance is frequently found to be favourable to the patient, the progress of the symptoms being thereby, for the time, arrested; even in the latter stages of the disease, when loss of blood could hardly be considered to be warranted, it may nevertheless be proper to recommend it.

When the process of ulceration is simply confined to the uterus, and cellular membrane surrounding it, the symptoms proceed with a remarkable degree of regularity and uniformity, but when a new organ is attacked new symptoms arise, appertaining to, and characteristic of, inflammation in such organ; for instance, when the rectum is attacked there is tenesmus, great heat in that part, increased distress on voiding the fæces, and exquisite tenderness of the gut if the finger be carried into it; so, in like manner, if the disease proceeds to the bladder, shivering usually comes on, succeeded by heat, which is fixed and constant, together with strangury. If the disease makes its way, which however is not very common, into the cavity of the abdomen, symptoms of peritoneal inflammation will present themselves, such as tenderness of

the belly, distension of its cavity, and a small frequent pulse. Now, if these symptoms be allowed to proceed, the patient will die as she would do if attacked by acute inflammation of the bladder or peritoneum; thus, the presence of these symptoms, even at a late period of the disease, may call for the loss of blood, although under any other circumstances it would be improper to direct such a remedy. The management of the discharge from carcinomatous ulceration is a circumstance deserving the best attention of the practitioner; this discharge appears to have the power of converting the neighbouring parts, to which it is applied, in some instances, into sores of a similar character to that by which it was itself secreted, and there is reason to believe that the spreading of carcinomatous ulceration may be greatly retarded by the employment of those means which absorb or remove the ichorous fluid secreted by them. Common aphthous sores, which frequently arise about the os externum of women who have long laboured under diseases of the female organs, may also possibly be converted into malignant ulcerations; these observations especially apply to carcinomatous ulceration of internal parts, in which discharges are more likely to be retained than where the disease attacks the external surfaces. If it were only that the fœtor attending such sores would be removed by cleanliness, attention to this circumstance would be of great consequence, inasmuch as the patient's health, and that of such persons as may associate with her, will be less likely to suffer than where constantly breathing an impure atmosphere *.

The vagina should be repeatedly syringed out with warm water, and, as long as the patient's strength permits, the daily use of the hip-bath should be enjoined. It acts as a soothing fomentation to the part, and any portions of sloughy matter which may be loosely attached, will be removed by the action of the syringe. Much relief will be thus produced. Injections containing sedative or detergent remedies are also useful: thus, for instance, the decoct. papaveris, or a little ext. of conium or hyoscyamus mixed in warm water frequently produce considerable relief. According to Sir C. M. Clarke, a strong decoction of carrots has sometimes the happiest effects; and this I can easily imagine, from its utility when applied to sloughing surfaces elsewhere. A dessert spoonful of yeast in warm water I have found of much service; and where the fœtor of the discharge is very offensive, a few drops of the solution of chloride of lime or soda, largely diluted, will remove it, but it should always be used very weak, as a slight increase of quantity produces much pain in the back and loins, and not unfrequently counteracts the effects of the sedative remedies which she is taking.

There still remain several very important diseases of the female organs in the unimpregnated state which deserve your notice, and among which I may enumerate polypus uteri, cauliflower excrescence of the uterus, as described by Sir C. M. Clarke, irritable uterus, hysteritis, &c.; but my time is so short for finishing the rest of my course, that, with the exception of polypus uteri, I must delay the consideration of these diseases until a future period.

The mucous membrane which forms the internal covering of the uterus, and which is a continuation of that which lines the Fallopian tubes and external passages, possesses powers of production in a high degree. By it is secreted that pulpy membrane which serves to attach the ovum to its cavity. In many of the class mammalia, especially the ruminantia, those little mushroom-like prominences, called cotyledons, are formed from it, and which, attached by long slender stalks to the internal surface of the uterus, frequently project nearly an inch into its cavity. The mucous lining of other cavities, especially those of the nose and throat, give equal proofs of their powers of production. It is therefore by no means surprising that, when the formative powers of these organs become anormally excited, growths should be developed which bear a strong resemblance to the cotyledons above-mentioned, and which have received the name of *Polypi* *.

A uterine polypus is an insensible tumour, commonly of a pyriform shape, hanging with its broad extremity downwards, and attached by a thin stalk or pedicle to the fundus, cervix, or mouth of the uterus. Sometimes, however, it is more spherical, and attached by a broader base. On its outside it is covered by a mucous membrane of pale flesh-colour, streaked with veins. Its internal structure is composed of a spongy cellular tissue, which Levret compares, in point of colour and consistence, to boiled cow's udder, and which, according to Carus, is copiously permeable by blood, which is evidently supplied from the venous cells of the uterus. It varies, however, in this respect, being sometimes fleshy or tendinous, or, according to Siebold, even horny. Among the preparations of polypus uteri upon the table, the one which I here show you was removed by ligature from a patient aged forty-nine; her principal symptom was profuse menorrhagia. The polypus, as you see, is cut open, and appears to consist of that fibrous structure described by Levret. In this which I now hold up, a very different structure is apparent; it was removed by ligature from a patient by the late Sir R. Croft, and appears to be nothing else than a subcartilaginous tumour. Polypi of the uterus have been distinguished according as they are attached to its fundus, cervix, or mouth. Of these the first is met with most frequently, while the third species occurs but rarely; hence polypi are sometimes completely enveloped in the uterus, and their presence detected

* Sir C. M. Clarke on Diseases of Females.

* Carus Gynakologie.

with great difficulty, while at others they project into the os uteri, and hang down into the vagina; this is always the case when the polypus begins to attain a considerable size. A polypus of the first species, which arises from the fundus uteri, is extremely difficult to distinguish in the earlier stages: as long as it is small it produces scarcely any change in the uterus and adjoining parts, but as it gradually increases it distends the uterus, and is accompanied by a train of symptoms which may lead a superficial observer to suspect pregnancy. A slight feeling of pressure felt in the region of the pelvis, frequent pains in the loins, sense of pricking in the breasts, disappearance or irregularity of the menses, at times a considerable discharge of blood, a difficulty of passing water, deranged digestion, nausea, and vomiting, will easily induce a suspicion of pregnancy. Even at this early age polypus may be distinguished by attention to the manner and degree in which the abdomen swells, because it does not show the same gradual increase of size during the same interval as it does in pregnancy. As the polypus gradually increases, the cervix uteri becomes shorter, the os uteri dilates, and a firm spherical tumour is felt pressing against the opening, insensible, but bleeding when touched. The uterus swells, the rectum and neck of the bladder become pressed upon, repeated discharges of pure venous blood, or of a fœtid watery fluid mixed with slime and fibrous portions of the polypus follow; emaciation takes place, accompanied by loss of strength and vertigo; faintings come on at each time of the discharge, and a low fever is established. At this period the disease can be no longer mistaken for pregnancy; the dilated os uteri, the nature of the discharges, the duration of the complaint, the absence of the child and its movements, are pretty certain signs. As the polypus increases, the os uteri becomes more and more dilated, until at last it descends into the vagina. This takes place either suddenly from any accidental circumstance, as from a fall or very severe shock of the body, or it comes on gradually, in which latter case expulsive pains come on, which by degrees force it into the vagina; as soon as it has reached the vagina, and is now no longer enveloped and pressed upon by the uterus, its growth proceeds with much greater rapidity. It presses upon the rectum and bladder, and obstructs the evacuation of their contents proportionally; violent hæmorrhages recur at short intervals, producing much debility; these arise now chiefly from the pressure which the os uteri exerts upon the neck of the polypus, the blood not being able to return, the tumour becomes distended, the veins very prominent, and rupture of its vessels takes place from the slightest cause; in the intervals a considerable discharge of watery mucous fluid continues, which still further weakens the patient. A polypus uteri at this stage may be mistaken for prolapsus or inversion; the diagnosis between it and the former is very easy. In prolapsus the os uteri will be found at the lower extremity of the tumour; and even if the polypus has a depression at this part, it may easily be distinguished by the finger, or at most by passing a probe or catheter, which, in prolapsus, will easily penetrate into the cavity of the uterus, but not in the case of polypus. A polypus uteri resembles a pear suspended by its stalk, viz.—thickest below, but gradually tapering towards its upper extremity. The tumour of a prolapsed uterus is of a form precisely the reverse of a polypus, being smaller below and broader above; a prolapsus can be reduced with tolerable ease and with great relief to the patient, whereas a polypus cannot be reduced, and every attempt to return it produces much pain and uneasiness. The uterus is sensible to the touch, a polypus is insensible. Moreover, a probe can be introduced along a polypus to some distance into the vagina, and even to the fundus uteri, whereas in prolapsus it is soon obstructed by that portion of the vagina which is attached to the cervix uteri.

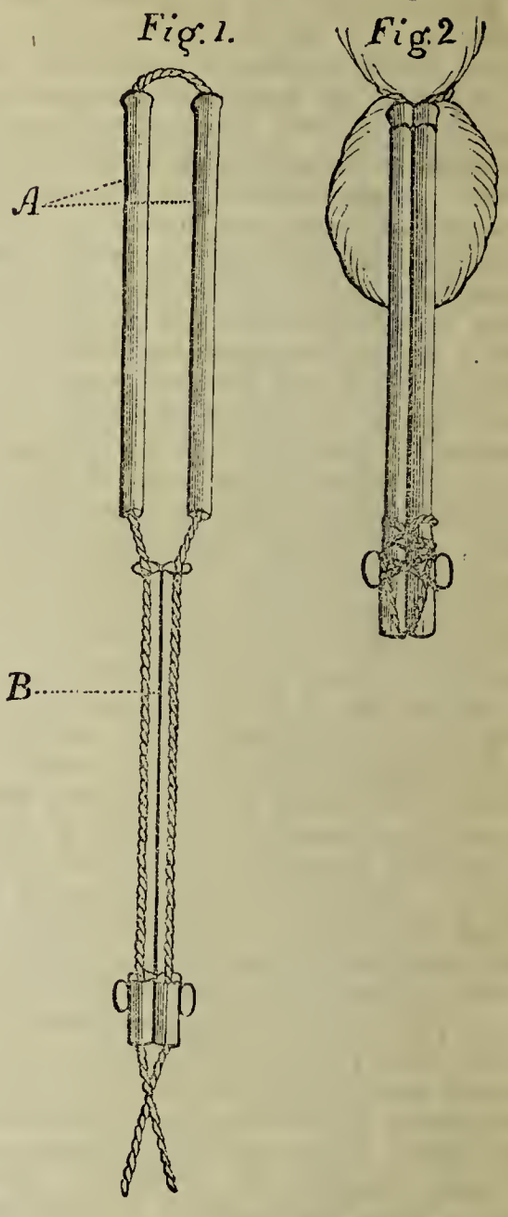
The diagnosis between polypus and inversion of the uterus is not quite so easy; attention, however, to the manner of its origin, and to certain other points, will generally prevent any mistake. Polypus of the uterus always comes on gradually, whereas inversion generally appears suddenly, and always (or nearly so) shortly after labour; the one is insensible, the other is sensible, to the touch. As in prolapsus, so it is with inversion, viz. that the shape of the tumour differs very considerably from that of a polypus, being broad above but small below; this, however, will hold good only where the inversion is of a very recent date, because after a time, from being constantly encircled by the os uteri, it loses a considerable portion of its sensibility; the inverted fundus swells, whilst the body of the uterus, from constant pressure, gradually diminishes in bulk, and thus materially increases the difficulty of forming a correct diagnosis; even in large polypi the os uteri is seldom much dilated, whereas, in inverson, especially when recent, it is dilated to nearly its full extent. Like prolapsus, reduction is not difficult in a recently inverted uterus, and always brings immense relief to the patient.

As to the *causes of polypus uteri*, but little certain is known. They seem in some cases to bear a considerable resemblance to the fleshy tubercle of the uterus, and to be produced by similar causes, whatever they may be. They are chiefly met with in persons who have had children, who are of a torpid flabby habit, and mostly at that period when uterine activity begins to cease, and when these organs are peculiarly liable to morbid growths. Severe instrumental labours, badly extracted placentæ, and other causes of irritation to the internal surface of the uterus, imperfectly cured syphilis, a dissipated life,

and abuse of ardent spirits have been enumerated among the causes of these affections. "The cure of polypus," says Dr. Gooch, "affords one of the most striking instances of the triumph of our art." This is done by applying a ligature round the stalk, and tightening it until it falls off.

The instrument and manner of applying a ligature, as described by Dr. Gooch, are so simple, that I cannot do better than describe them in his own words. "The instrument which I use, and which in numerous cases has assisted me easily through the operation, consists of two silver tubes, each eight inches long, perfectly straight, separate from one another, and open at both ends; a long ligature, consisting of strong whipcord, is to be passed up the one tube and down the other, so that the middle of the ligature passes across from the upper end of one tube to the upper end of the other, and the two ends of the ligature hang out at the lower ends. The tubes are now to be placed side by side, and, guided by the finger, are to be passed up the vagina along the polypus, till their upper ends reach that part of the stalk round which the ligature is to be applied, and now the tubes are to be separated, and while one is fixed the other is to be passed quite round the polypus till it arrives again at its fellow tube, and touches it. It is obvious that a loop of the ligature will thus encircle the stalk. The two tubes are now to be joined, so as to make them form one instrument. For this purpose, two rings, joined by their edges, and just large enough to slip over the two tubes, are to be passed up till they reach the upper ends of the tubes, which they bind together immoveably; two similar rings, connected with the upper by a long rod, are slipped over the lower ends of the tubes, so as to bind them in like manner; thus these tubes, which at the beginning of the operation were separate, are now fixed together as one instrument; by drawing the ends of the ligatures at the lower extremities of the tubes, and then twisting and tying them on a part of the instrument which projects from the lower rings, the loop round the stalk is thereby tightened, and, like a silk thread round a wart, causes it to die and fall off. The instrument being thus adjusted is to be left, but every night and morning the ligature is to be untwisted from the shoulder of the instrument, drawn tighter, and again fixed upon it.

(The annexed engraving represents the instrument which was shown. *A*, Fig. 1, are the tubes as described, with the ligature passing through them; below are the rings connected by the rod *B*, through which the ligature also passes. When one tube has been carried round the neck of the polypus till it meets its fellow, as in Fig. 2, the rings are pushed up along the tubes, which are thus fixed securely together, and the ligature tied round the lower end of the instrument.)



The patient must of course understand the necessity of taking care in turning from one side to the other, lest the instrument be productive of serious injury to the neighbouring parts.

The only danger attendant upon the operation is that the ligature may include a portion of the uterus. This will be known by the pain which it produces, followed by vomiting, great restlessness, and prostration of strength, cold sweats, low pulse, and all the well known symptoms of strangulated hernia.

"The danger of including the uterus in the ligature," says Dr. Gooch, "may, I think, always be avoided by the following rules. 1st. Instead of aiming at passing the ligature as high up as possible upon the stalk, to pass it as low as possible, taking care to pass it over the body of the tumour; it is true by these means a portion of the stalk will be left above the ligature, but I know from experience that it does not grow again; like the remnant of the umbilical cord, it dies and falls away: these tumours have little life, and die above as well as below the ligature. 2ndly. When the stalk grows from the cervix, if the os uteri can be felt, it will be the best guide

where the neck ends and the stalk begins; the ligature ought to be applied a little below the orifice, but if it cannot be felt, the next best guide is the ordinary length of the projecting part of the neck, that is, about two-thirds of an inch. When the polypus is very large and the vagina closely contracted, it is difficult or impossible to reach the stalk and the cervix so as to make anything like an accurate measurement, and the first rule only is practicable. 3rdly. To attend to the sensations of the patient when the ligature is tightened; if it gives much pain there is every reason to believe that it has included a part of the uterus. The time required for the ligature to make its way through, depends on the thickness of the stalk and the frequency with which the ligature is tightened; this ought to be done night and morning; it commonly requires four or five days, but sometimes only two, and sometimes as long as ten; as soon as the ligature is tightened, the hæmorrhage, if it has continued up to the moment of the operation, generally ceases, a fœtid discharge, more fœtid every day, comes away, which requires to be washed out by tepid water, injected night and morning. When the polypus is of moderate size it falls away, together with the instrument, but when very large, the instrument drops out, leaving the polypus loose from its attachment, but confined within the vagina, in which case I once found (says Dr. G.) a vectis necessary for its extraction. Nothing can be more successful than this operation generally is; a disease which had resisted remedies for several years, is removed within a week, the hæmorrhages which had lasted so long, and had occasioned so much debility, suddenly cease, and the patient rapidly recovers her health: sometimes, however, this requires to be assisted by the usual restorative remedies, such as pure air, tonics, especially bark or steel, and sea-bathing, if the season admit of it *.

LECTURES
ON
FORENSIC MEDICINE,
DELIVERED BY
DR. HAY GRAHAM,
At the Westminster School of Medicine.

LECTURE VIII.
Infanticide continued.

GENTLEMEN,—In the commencement of our last lecture it was laid down that, though a child might be born alive, yet if it had not arrived at that period of utero-gestation as to be capable of living, it was to be considered an abortion or miscarriage, the same as if still-born; and that this period was to be considered, as a general rule, to take place at the age of seven months, notwithstanding there are some rare exceptions to the contrary. When treating of the development of the fœtus, those marks, both external and internal, were pointed out, by which the age might be known. In addition to them there are others, taken from the average weight and length of an infant at different periods of pregnancy, which, though not infallible in themselves, are yet of some value, when taken in conjunction with the general appearance of the body. For this reason, since it is often of the greatest importance to ascertain the age of an infant, you ought to be acquainted with them. I have therefore extracted from Lecieux and other French authors, who have treated this subject with considerable attention, such information as is deserving your notice. As an average of weight and length, due allowance must be made for the country from whence they are taken; and as an estimate of age, allowance for the size and healthy condition of the parents, which, generally speaking, must influence the greater or less size of the offspring;—this is of great importance, if we consider the weight and length of the body as a criterion, whether the child has been born at the full period of gestation. But it has been generally estimated too high. Mauriceau asserts, that a child born at the full period, and in all other respects healthy and well proportioned, weighs generally from eleven to twelve pounds, of sixteen ounces to the pound. Roederer averages it from six to seven and a half, which is nearer the truth. Dr. Hamilton mentions from eight to nine pounds. M. Camus obtained the following results from 1541 children weighed at the time of birth:

				& some ozs*.
3	weighed from	1.1 to 1200	grammes or	2lb
31	,,	1.5 to 1800	,,	3
97	,,	2.0 to 2400	,,	4
308	,,	2.5 to 2800	,,	5
666	,,	3.0 to 3300	,,	6
380	,,	3.4 to 3800	,,	7
100	,,	4.0 to 4200	,,	8
16	,,	4.4 to 4800	,,	9

These researches were continued à l'Hospice de la Maternité, at Paris, to a considerable extent, which confirmed the result of the above table; from whence it appears that the average weight of a child, well proportioned and born at the full period, is 3000 grammes, that is, 100 ounces, or six pounds and a quarter French weight. Baudelocque, who paid much attention to this subject, and whose practice was very extensive, reports that he has seen many new-born children who weighed 5000 grammes, that is, about ten pounds, some that have weighed 5900, or twelve pounds, and one 6400, or thirteen pounds; but that he should

* Account of Some of the More Important Diseases Peculiar to Women.

* A *gramme* is the unity of the new French weights, and is equivalent to about nineteen grains. It is the 10th of a decagramme, the 1000th of a kilogramme, and the 10,000 of a myriagramme.

doubt of any weighing fifteen pounds, and still less twenty-five, as is related (par des bonnes femmes *de l'un et l'autre sexe*) by the old women of both sexes.

In England, the new-born children are larger than those of France, and the average weight at Edinburgh is a pound heavier than at London. Both in Scotland and in England there have been new-born children, contrary to Baudelocque's opinion, of the weight of fifteen pounds.

Lecieux makes mention of a diminutive new-born child, which was shown him, and which he was assured had arrived at the full term, that weighed only 500 grammes, or rather more than sixteen ounces; and adds, that he had seen another, which was equally reputed at term, and which was remarkably lively, that weighed only 800 grammes, or twenty-four ounces; and that, by further examination, it was easy to ascertain that these two fœtuses had at least arrived at the period of seven or eight months. I know not whether any such diminutive children have been known in Scotland or in England, but I think, gentlemen, enough has been said to prove, as I pointed out in my lecture on Uterine Life, or the Development of the Fœtus, that the weight of a new-born child is, simply, no criterion of its age.

Some authors have laid much stress on the length of the infant, which is ascertained by means of an instrument called *a mecometer*, or measure of length, derived from μήκος, *length*, and μετρον, *a measure*. This instrument is precisely similar to that which is in common use amongst our shoemakers, and called "a shoemaker's rule," sufficiently familiar as not to need description. From a great number of observations made on this subject à l'Hospice de Maternité, at Paris, the following table was drawn up, as indicating the average length:

At 5 months the length of the fœtus is	255 millimetres*, or	$9\frac{1}{2}$ inches.
6 months	325	12
7 months	380	14
8 months	440	16
9 months	488	18

Some children at term are not more than thirteen or fourteen inches, others, again, are twenty-one; some have been known twenty-four; and there is mention made of one that was twenty-five inches. Baudelocque observes, that the two extremes may be considered as sixteen inches, and twenty-two, or, on the outside, twenty-three inches.

When treating on the growth of the fœtus, I directed your attention to those characters by which the age of a fœtus might be ascertained, and amongst others to that of the transversal median line, which, at the earlier periods of gestation, corresponds with the apex of the sternum, that it gradually descends, and at the ninth month is a line or two below the umbilicus, whereas in the adult it is at the superior rim of the pelvis.

Other tables have been elaborately drawn out, and calculations made on the relative weight of the body with that of the lungs of fœtuses which have died before, during, and after delivery. Again other tables have been made of the relative weight of the lungs before and after respiration, but as the data from which these tables are drawn are subject to considerable variations, we cannot place much reliance on their results. For this reason I shall not fatigue your attention by detailing those results, or by expatiating on their merits or criticising their defects.

Infanticide may take place either by omission or commission; by neglecting to bestow those attentions which are indispensably necessary for the safety and preservation of the new-born infant, or by violent means putting a period to its brief existence.

Infanticide by omission may take place in four ways, viz. by *asphyxia*, by *umbilical hæmorrhagia*, by the *temperature* of the atmosphere, and by *inanition*.

Asphyxia may arise, 1st. from the face of the infant resting on one of the thighs of the mother, after it has quitted the vulva; in the majority of cases, asphyxia is the consequence should the infant not be turned; for this reason accoucheurs generally place it on one side with the back turned towards the mother, lest the fluids should flow into the mouth. On this point Dr. Hunter observes, that "a strong child may be born perfectly alive, and die in a very few minutes for want of breath, either by being on its face in a pool made by the natural discharges of the mother, or upon wet clothes, or by the wet things over it collapsing and excluding the air, or by being drawn close to its mouth and nose by the suction of breathing." In corroboration of this he relates the following anecdote: "a lady at a pretty distant quarter of the town was taken with labour pains in the night time. Her nurse who slept in the house, and her servants were called up, and I was sent for. Her labour proved hasty, and the child was born before my arrival. The child cried instantly, and she felt it moving strongly. Expecting every moment to see me come into her bed-chamber, and being afraid that the child might be some way injured if an unskilful person should take upon her the office of a midwife on the occasion, she would not permit the nurse to touch the child, but kept herself in a very fatiguing posture, that the child might not be pressed upon or smothered. I found it lying on its face in a pool which was made by the discharges, and

* A *metre* is the unity of the new French measures, and is the millionth part of the arc of the earth's meridian, between the North Pole and the Equator, and is about three feet eleven lines and a half French. The millimetre is the thousandth part of a metre, and is not quite equal to half a line.

so completely dead, that all my endeavours to rouse it to life proved vain." 2nd. Asphyxia, as I have just mentioned, may take place by wet clothes, linen, or other things, covering the mouth of the child, and which ought to be removed. Dr. John Beck relates the case of a woman whom he was engaged to attend; being suddenly taken in labour, before Dr. Beck had reached the house, she had been delivered of a male child, which he found lying dead under the bed-clothes. She informed him that she had heard it cry, but as she was alone had been unable to give it any assistance. 3rd. Sometimes the tongue is thrust back against the palate, or the mouth is filled with glairy mucus, so that in either case respiration is impeded; this is easily remedied by introducing the finger into the mouth. 4th. Some infants may be attacked with the *asphyxia of birth*, and who would infallibly perish, were not respiration to be established, either by inflating the lungs, or by friction, simple or stimulating along the back, or the chest, the soles of the feet, and the palms of the hands; or by wrapping them up in warm flannel, or by putting them into a warm stimulating or aromatic bath, or, what is much better, by employing the whole of these means "*semel et simul*," at one and the same time. 5th. They are sometimes attacked with real apoplexy, and are only enabled to breathe after they have bled awhile from the umbilical cord, been exposed to the cool fresh air, gently pressed on the stomach and chest alternatively, and recourse has been had to baths, frictions, and inflation of air, as in the preceding case. 6th. Sometimes they perish from the simple circumstance of the umbilical cord not having been tied, or, where the ligature has been made, death may take place if umbilical hernia should exist, by including a portion of the intestine contained within the cord in the ligature, and thus producing strangulated hernia. 7th. Death may ensue from gangrene of the umbilicus, when the inflammation is very acute, and not to be counteracted by emollients; but this is an extremely rare case. 8th. Death may take place, as has been already mentioned, from the sudden expulsion of the child, and its falling on the ground.

Umbilical hæmorrhagia is sometimes the cause of death, but yet it seldom occurs that hæmorrhagia takes place, though a ligature has not been passed over the cord, unless the new mode of circulation has not been established at the time the lungs commenced their functions, because from that moment the blood no longer passes through the umbilical vessels. Such an effect is more likely to be produced when the cord is separated by a sharp instrument near the abdomen, than when torn or divided by a pair of scissors. The females of all inferior animals instinctively prevent this from taking place by gnawing the cord of their offspring. But we should not be justified in arriving at such a conclusion from the pale, bloodless appearance of the body, for this is often seen in the bodies of those fœtuses which have died before the full term of utero-gestation. Yet if other circumstances concur, such as that the child had arrived at the full period, was well proportioned, and had every appearance of being capable of living, that the placenta was not inserted over the os uteri, and the delivery natural, there will be every reason to conclude that death has taken place from hæmorrhagia.

The temperature of the atmosphere would unquestionably cause death. It has been remarked that more children die in winter than in summer, and it has been proved that this is to be attributed only to the cold. Consequently if those precautions have been omitted which are necessary to preserve the warmth of the child, we may reasonably attribute such neglect to *design*, except where gross ignorance, or the want of proper means, may be pleaded as an excuse. In cases of exposure there can be no doubt respecting the motives. But where this cause has operated slowly, it would be difficult to establish the fact by mere inspection of the body.

Inanition, or the want of proper nourishment, may be the cause of death. The want of food continued above twenty-four hours, may prove fatal to a new-born child. It is an ascertained fact, and beautifully illustrated by our poet in the description of a family starved to death, that the youngest perish the soonest. The greater part of children who are exposed perish from the combined effects of cold and hunger. When treating of starvation, I shall fully enter into the subject, and enumerate all the symptoms with which it is attended.

In forming our judgment of the crime of infanticide by omission, we must take into consideration all the circumstances of the case, moral as well as physical. 1st. Whether the mother attempted to conceal her pregnancy, and if so, 2nd, whether she had made any preparations for the birth of the child, in which case it ought not to be supposed she intended to destroy it. 3rd. If she was ignorant of being with child. 4th. If she was suddenly seized with labour pains in a place where she was destitute of every thing necessary for her condition. 5th. If she had convulsions, or if she fell into syncope from hæmorrhagia, or any other cause; if she was delivered during an attack of apoplexy, or in a state of syncope, or of apparent death, or of profound stupor and insensibility. After the woman has been examined and comparisons made, any of the above circumstances should be duly appreciated for the benefit of the accused.

The principal causes of infanticide by commission, are such as proceed from contusions, fractures, luxations, injuries inflicted by cutting instruments, and such as are inflicted by pointed instruments; asphyxia by submersion, by inspiring deleterious gases, by suffocation and strangulation; also by detruncation, poisoning, combustion, and torrefaction.

Contusions require to be examined with the

greatest attention, because their external appearances not only have frequently a great resemblance to such as may proceed from an internal cause, but also because these contusions are frequently produced by a crushing or compressing force, which may be brought into action by an involuntary or accidental cause. The usual effect of contusion is ecchymosis, or extravasation of blood in the subcutaneous cellular tissue, the extent and depth of which are generally in proportion to the surface of the offending body, and the force or degree of violence with which it acted. These bruises or contusions ought not to be confounded with those livid marks that are common after death, and which correspond with the places on which the body laid, whilst the act of cooling was going on. In the one the lividity does not extend beyond the skin, and consists simply of an infiltration or injection of the capillary vessels of the skin, whilst, in the other, an extravasation takes place in the subcutaneous cellular tissue.

Contusions and ecchymoses of the head and neck require to be examined with the greatest care, not only because they are the most dangerous as well as frequent in cases of infanticide, but also, notwithstanding their frequent occurrence with a criminal intent, they may arise from causes peculiar to labour, and altogether independent of the inclinations or intentions of others.

Ecchymoses of the neck should be accurately observed as to their form, whether they are circular or irregular, especially if they present the marks of fingers, and if the skin is entire or abraded. This scrutiny is of the greatest importance, since the fœtus might have been strangled by the contraction and compression of the orifice of the uterus, or by the umbilical cord; and it is to be remembered that ecchymosis is not invariably a constant mark of strangulation. But when this mark is present, and it is proved that respiration has taken place, there can be no doubt that strangulation has been criminally effected. For in the other case respiration could not have been performed, unless we assert the reality of the vagitus uterinus, that is where, after the discharge of the waters, a child has been heard to cry in the belly of its mother.

Sometimes there are tumours on the body of the fœtus, which have been produced by violence after birth, but in many cases they proceed from compression during labour. The first are observed on different parts of the body, are also more irregular in the form, deeper seated, and redder or more livid than the others, on account of their containing extravasated blood. The others are more superficial, and contain only a serous fluid, infiltrated into the cellular tissue. Besides they are never accompanied with those fatal consequences terminating in death, and their seat is limited to certain parts of the head, as the vertex, the occiput, or the parietes. Yet it is to be remembered, that when a child has died during labour, in consequence of the long continued contractions of the uterus forcing the head against the pelvis, where the umbilical cord, or the placenta, has been compressed, thus causing apoplexy; it might so happen that these tumours would assume the appearance of being produced by external violence, and not only be accompanied with lividity and extravasation of blood, but also with depression, and even fracture of the bones of the cranium.

Fractures and dislocations are not unfrequently the result of the means employed to perpetrate this crime, especially the former; but they are sometimes produced by attempts to expedite the delivery, and sometimes during a precipitate delivery, from the infant falling on the ground or floor. Infanticide has been frequently committed by twisting the neck, and thus causing a luxation of the cervical vertebræ, which is easily discovered by examining the vertebræ and their ligaments; the apophysis of the articulation will be found displaced; the head is inclined to the contrary side; the face is pale, and there is no congestion in the brain; in addition to these, the marks of the fingers will be seen on the neck. If it is proved, that the child has breathed feebly, and it should appear from the declarations of the mother, that no effort was used in pulling or drawing the child from her during delivery, and that it had not afterwards suffered from any fall, it would be difficult to attribute its death to any other cause than a criminal motive. When attending the lectures of Dr. Hamilton, I remember his citing the case of a half-pay captain of dragoons, who, being of an active turn of mind, directed his attention to midwifery, "de gustibus nil disputandum;" as his services were gratuitous the captain was on good terms with the country midwives, and was in the habit of being called to all difficult cases; amongst them was one of an arm presentation, which, not being acquainted with the art of turning, completely baffled his skill and judgment. However he determined to persevere, and, by dint of pulling and twisting, he at last overcame the difficulty, for the arm separated from the body. The child, a fine boy, was born alive and continued to live and thrive, the wonder of the surrounding country, for the captain quietly carried off the arm in his coat pocket, and the circumstance did not become known until many years afterwards. There are cases on record, where the body having been jammed in the passages the head has been pulled off.

Injuries inflicted by cutting-instruments are easy to be traced to their proper origin, whether voluntary or intentional. There is a recent case, where the life of the child was sacrificed by the vain attempts of the mother to separate the umbilical cord. Not being able to lay my hand on this case I cannot enter into the detail; but I remember, when reading the newspaper account, the impression made on my mind was, that, notwith-

standing the woman was acquitted, it was involved in considerable doubt.

Sometimes decapitation and dismemberment are had recourse to, in order more readily to conceal and make away with the body. It is not difficult to distinguish whether this has been done before or after death; if during life, the incised muscles will be found to be retracted, as in the crimping of fish, and in ordinary wounds from cuts.

Injuries inflicted by pointed instruments produce a similar effect, and are surrounded by a red areola or ecchymosis. Acupuncture, or thrusting a needle into the brain, is not an unfrequent mode of destroying children. Sedillot mentions the case of a midwife, who was convicted and executed about the middle of the last century. This woman was in the habit of thrusting a long needle into the brains of new-born children, "in order," as she said, "to people the kingdom of Heaven." Acupuncture may be committed either by the nostrils, the ears, the temples, the fontanelles, the sutures, or into the medulla spinalis between the vertebræ, or into the heart, or into the abdominal viscera through the rectum. Guy Patin, Belloc, Brendel, and other authors, relate several cases of this kind; amongst them is one of a midwife, who was in the habit of destroying children, immediately on the birth of the head, by thrusting a red-hot needle through the meatus auditorius externus into the brain.

Previous to opening the body of a child supposed to have been murdered, it is necessary to shave the head and most carefully inspect every part, in order to discover any punctured ecchymosis or blister which may lead to the detection of a wound, and then to follow it by dissection. If, on the contrary, such a wound should not appear externally, but be discovered on the dissection of the body, the reverse order should be observed, and it should be traced backwards to its origin.

In cases of infanticide by asphyxia, it is incumbent on us to observe, with the strictest attention, all the attending circumstances; thus, where life has been destroyed by suffocation, and the mouth and nostrils have been stuffed with rags or any other substance, we may legitimately infer that such violence has been the cause of death; but, if the fœtus is found enclosed in a box of small dimensions, where death would equally take place from suffocation without such violence, it is then necessary to exercise the most scrupulous attention combined with extreme caution, for the infant may have perished from some other cause, and have been placed, after death, where the body was discovered.

Asphyxia by submersion may be ascertained, if, upon inspection, it appears that the child has breathed, that the lungs contain a portion of the same fluid as that in which the body is found, and that there does not appear to have been any other cause of death; but if no fluid is found in the bronchiæ or lungs, the proof ceases to be positive, and amounts only to a probability. In pursuing this investigation, we should also observe if any of the circumambient fluid has been taken into the stomach, for, though not necessarily present, yet it would be an additional proof that submersion had taken place during life.

Asphyxia may have been produced by strangulation, which we have already noticed; also by respiring deleterious gases, as those evolved from a privy; but here the child might have been precipitated by the unlooked for suddenness of the labour pains, as well as by the hand of crime.

Asphyxia by suffocation is sometimes easily proved, as in case of stopping up the mouth and nostrils; but sometimes it arises from omission without any criminal intention, as in the case related by Dr. Hunter.

The combustion of the body of the infant precludes the possibility of proving the crime of infanticide, unless from the examination of some of the bones which may have escaped destruction. When the body is only scorched or burnt, we may obtain some *data* from whence to draw our conclusions. Thus, should the integuments be blistered, we may conclude that the child has been thrown alive upon the fire. Sometimes the lungs may be submitted to examination, to ascertain whether respiration had taken place. But much must depend upon the extent of the ravages of the fire, and much upon the good sense and judgment of the medical man.

In pursuing our investigations on this subject, we ought to adduce sufficient proof that the woman has been lately brought to bed; that the period of delivery corresponds with the state of the body of the child; and that the fœtus, which is the corpus delicti, is the identical offspring of the accused.

These are to be discovered by the symptoms of recent delivery, which have been already noticed; by the state of preservation or decomposition of the body of the child, which, under limitation of circumstances, ought to correspond with the presumed period of delivery; by the growth or development of the fœtus compared with the period of gestation at which the woman may perhaps be known to have brought forth. But, as it is difficult to lay down any precise rules by which these indications can be accurately known, much must be left to the scientific knowledge and judgment of the medical man to supply the defect. For example: if the body of a new-born child is found far advanced in putrefaction, and the delivery of the suspected woman has very recently taken place, we ought attentively to take into consideration all those circumstances or causes which might accelerate the putrid decomposition; on the other hand, we should equally bear in mind whatever might retard putrefaction when no symptoms of it have appeared, notwithstanding the length of time which may have elapsed

since the delivery of the woman. If it is proved that a woman was delivered of a child born at the full period, and the fœtus, which is the subject of inquisition, has not arrived at uterine maturity, there is strong reason to doubt its identity with the one of which the woman has been delivered. And even if otherwise, yet the medical man ought to be very cautious how he positively affirms that the appearance of the fœtus corresponds precisely with the period when the woman was delivered. And in no case should the medical man presume positively to affirm that the child found belongs to the accused woman; for there are no means by which such an assertion could be substantiated, unless it is in cases of hereditary mal-conformation, or where the extremities of the umbilical cord and of the placenta are found to correspond with each other.

Having now laid down the principal facts relative to infanticide, in order the more fully to impress them on your memory, I shall beg leave to recapitulate them.

The entire submersion of the lungs should be considered a proof that the infant has not respired.

But if, on the contrary, the hydrostatic test of the lungs should tend to prove that the child has breathed after birth, yet this inference can only become positive under the following conditions:—

The examination of the lungs and blood-vessels, to discover whether respiration has taken place, should only be made when the fœtus has arrived at the full period, and was capable of living, in which there was no mal-conformation or any pathological impediment that could either prevent respiration from taking place, or afterwards cause it to be discontinued.

During the examination every precaution ought to be taken that the floating of the lungs does not proceed from incipient putrefaction or from emphysema.

The results of the hydrostatic tests, both ancient and modern, ought to coincide with the increased weight, in order to prove that respiration had been complete.

The other concomitant appearances taken from the state of the lungs, the thorax, the diaphragm, the abdominal viscera, and other parts already mentioned, ought to be present and coexist, so as to strengthen the proof that respiration has been complete.

It ought also to be proved that insufflation has not been had recourse to.

Every means should also be taken to prove that there has not been any *vagitus uterinus*, or respiration in utero; yet even if otherwise, and the child should die in the passages, the phenomenon would not be attended with appearances of complete respiration having taken place.

Some traces of criminal violence ought to be detected on the body of the fœtus, to which its death may be attributed.

All these conditions which are now pointed out, and which prove the infant to have lived after birth, still require to be confirmed by such as prove that the child did not perish either before or during delivery. For this end, it is necessary to be acquainted with the history of the accouchement, that is, if the state of the mother and the symptoms she experienced, indicate the fœtus to have perished a longer or shorter time before delivery. Here the following questions present themselves:— as whether the waters had been discharged some time previous to delivery, or if delivery had taken place immediately after their discharge? If the woman had been delivered without assistance, or if any force or manual operation had been had recourse to, or if she assisted herself in endeavouring to expel the fœtus? Whether any hæmorrhage had taken place previously, and how long, or if several times, and whether hæmorrhage had occurred during or after delivery? When the pains commenced, and how long they continued after the expulsion of the fœtus? Whether the woman was unconscious of what happened, either before, during, or after delivery? In what place and in what position the woman was delivered? Whether any means were used to restore the child to life, especially by inflating the lungs? In addition to these, many other questions may be asked, which may be suggested both from the circumstances of the case as well as from what has been already recited. In determining these and all other questions, where there is any doubt, the accused should have the benefit of that doubt, lest by an incorrect judgment the innocent should suffer for the guilty, or for a crime which has not been committed.

I shall now conclude this lecture by laying down a few rules to be followed in the judicial examination of the body of a fœtus.

M. Renard, in his excellent treatise on the method to be observed in opening bodies for judicial investigation, gives the following directions for the opening of a fœtus or new-born child:—

1st. After having ascertained the weight and length of the body, and carefully examined the condition of the integuments and limbs, of the natural passages and the umbilical cord, the whole extent of the spine ought to be laid open. For this end a longitudinal incision is to be made, extending from the occiput to the sacrum, and the muscles which cover the annular portion of the vertebræ to be detached on either side with the point of the scalpel; then, instead of a saw, to use a pair of strong scissors, which are to be introduced under the annular portion of the fifth lumbar vertebra, as near as possible to the base of its transverse apophysis; continuing from hence to the nape of the neck, the posterior portions of the vertebræ are to be successively cut through on each side, this long section is to be then removed, and all the parts contained in the

spinal canal are exposed to view, and can be easily examined.

2nd. Having shaved the head and carefully examined it, the usual crucial, or rather a T incision is to be made, extending backwards to the longitudinal section of the spine. The skin being dissected in each direction from the incision, the greater part of the cranium is exposed to view, so that the condition of the bones may be examined. One of the parietal bones and the corresponding half of the frontal bone ought then to be separated and removed. The best mode of performing this operation, without injuring the vessels of the brain or the venous sinuses, which is of great consequence in these researches, is to make a small incision with the point of the scalpel into the membranous commissure which unites the frontal with the parietal bone, and by means of this opening to introduce the blade of a pair of scissors, and, taking the direction of the edges of the parietal bone, to cut successively the membranous commissures of the frontal, temporal, and occipital bones; but, in making this section, which is extremely easy and simple, we ought to take care—first, not to open the lateral sinus of the meninges, which is always full of fluid blood, and very close to the mastoidean angle of the parietal bone. In order to avoid it, it is necessary, on approaching this point, to quit the direction of the membranous commissure, and to leave in this part a small portion of the parietal bone; secondly, after having cut the membranous commissures of three sides of the bone, it is to be raised up and turned back towards the vertex of the head, and then to be entirely detached by cutting through it at some distance from the median line, so as not to injure the veins which open into the median sinus of the meninges; the portion of the frontal bone is to be removed with the same precaution; thus the greater part of the lobes or hemispheres of the brain is exposed to view. The same operation is to be afterwards repeated on the opposite side. Having examined the brain and ascertained that no effusion of blood has taken place either in the ventricles or at the base, it is to be separated and entirely removed. The middle portion of the parietal bone, which had been left, is now to be detached, and the condition of the cerebellum and medulla oblongata is to be examined, if necessary.

3rd. The opening of the thorax is to be performed in the same manner as in the adult, except that the scissors should be made use of instead of the saw to cut the ribs and the sternum, and also for the examination of the mouth and the neck.

4th. As in the fœtus and the new-born child, the abdomen is proportionally much larger than in the adult, it is necessary, after having made the requisite incisions on the skin, to raise up the segment of the sternum, and gradually to separate, with the point of the scalpel, the portions of the diaphragm attached to this segment, then, as soon as the umbilical ligament of the liver is exposed to view, it is to be divided, and the further investigation to be conducted according to the usual method.

When treating on the examination of the bodies of persons found dead, I shall lay down to you, very fully, the rules to be observed in performing the "sectio cadaveris," both according to the method followed in England and the one made use of on the Continent, which, in my opinion, is much to be preferred.

Having dwelt more copiously, than at first I proposed to do, on the deeply interesting subjects of abortion and infanticide, I now take my leave of them, and though I might have considerably extended my lectures on this head, and have introduced much additional matter, yet I trust nothing important for you to know has been omitted; should it be otherwise I must plead as an excuse the extent of ground we have to pass over, the vast mass of matter we must analyse and submit to the evidence of our senses, the limited number of these lectures, and my earnest desire to compress, within as small a compass as possible, the largest quantity of facts, which, after all, is the only solid basis whereon to build the superstructure of knowledge.

Reviews.

The Study of Medicine, by John Mason Good, M.D., F.R.S., &c. *Improved from the Author's Manuscripts, and by Reference to the Latest Advances in Physiology, Pathology, and Practice.* By Samuel Cooper, Professor of Surgery in the University of London, &c. &c. Fourth Edition. 4 Vols. 8vo. Longman, 1834.

Few books in this country have obtained so much reputation as "Good's Study of Medicine." It was originally published at a period when we had no work that could be satisfactorily referred to as a text book, and which contained the various opinions of modern writers. The extent of research, and the original mode of thinking and analysing disease, which the author displayed on every subject, combined with a captivating style of composition, made it the first book in our language. It has now arrived at the *fourth edition*, and edited by one of the best, if not the best, commentators in the profession. Possessed of all the medical lore of his day, having industry to collate from every source that contains knowledge, and honesty to give every one his just meed of praise, the editor has introduced numerous and copious notes in the margin, on almost every topic, more especially on those which are surgical; and has further enriched this edition from the results of disease which have come under his own inspection. Any thing like a review, or an analysis of the book, would be unnecessary. Its merits are well known to the medical world; it is but our

duty to notice that there is a new edition, and that it has received great improvement.

The Medical Pocket Book for 1835, *containing a Case Book and Almanac, with an Account of the Medical Corporations, New Medicines, an Abstract of the Pharmacopœia, &c. &c. &c.* By John Foote, Jun., M.R.C.S. Renshaw.

We cannot but express our approbation at the industry of Mr. Foote, in the accumulation of so much useful matter, as is contained in his "Pocket Book," as well as the ingenuity he has displayed in arranging it in so small a compass. We have given but a small portion of the title of the book. Its contents are exceedingly multifarious; it contains matters with which every medical man should be acquainted. Independently of this, the pages of the first two-thirds of the book are so arranged, that one is divided into columns, marked name, age, temperament, disease, &c., for the purpose of narrating cases upon, and the opposite page is intended to mark the amount of sums of money received, paid, &c.

Some very judicious remarks are made on the mode of taking cases. The abstract of the Pharmacopœia will be found very useful as a reference to the doses of medicines, which the practitioner may not be in the constant habit of prescribing, and thence have forgotten for the moment. He will not be so liable to the accusation of having consulted a book before writing his prescription. We urgently recommend Mr. Foote's "Pocket Book" to our professional brethren; whether juniors or seniors, they will find it of great advantage in their "rounds."

FOREIGN MEDICAL LITERATURE.

Fondamenti di Pathologia Analitica di Maurizio Buffalini.

Elements of Analytical Pathology. By Maurizio Buffalini.

This is a very important and useful work, and one which has caused much discussion in Italy. It is, nevertheless, so arranged, as to be almost impossible to analyse it; we will, however, endeavour to give as concise a notice as we possibly can.

Like all the founders of systems, M. Buffalini has attacked all his predecessors, from Hippocrates to Broussais. He has given a condensed review of all systematic arrangements in the commencement of his work. In this examination he has rendered favour only to empirics, and from these doctrines alone he has supported his own theory. Nevertheless, all the assertions and reasonings by which M. Buffalini endeavours to destroy the systems which have preceded him, are far from always convincing. Even this part of his work presents interest, as it gives a comparative table of the different medicinal methods, and more particularly contains a detailed exposition of those which have succeeded in Italy for the last half century.

As to pathology, he believes that it has always been followed in a wrong light, in consequence of all pathologists founding their classifications on systems, and not on facts; and for this reason it has been considered too general, and the divisions founded on systems too universal, so as to distinguish any particular disease.

So far it might be true and applicable to certain pathologists, and we shall not go far before we can apply it to M. Buffalini, for many of his doctrines are also supported on theory. After concluding his examinations of other authors, he comes, in his second volume, to an exposition of his doctrine, and the foundation on which he supports it. The conditions of organised matter are the object of his first chapter, in which he appears to regard the vital movements as analogous to chemical. This part terminates by a pathological deduction, which, in admitting the first fact, appears to us erroneous. According to M. Buffalini, no organic disease can exist without some alteration in organic matter. If these laws are the same as physical and chemical laws, why does he not conclude that the imponderable agents, the chemical action of which is so powerful, may equally, either by their increase or diminution, cause disease in organisation. For example: in the succeeding chapters, M. Buffalini examines the influence of external agents on organisation, on the formation of diseases, and on the alteration of liquids, which the human body so frequently shows in a number of affections. He afterwards passes to what he terms the dissolvent properties belonging to certain diseases, which, he says, are in those in which the natural affinity of organs is weakened, and in which they are much more disposed to obey the laws of inorganic matter. He cannot conceive this state without the introduction into the organism of a principle contrary to the principal constituents, or without a notable alteration of the acts of assimilation. Nearly the whole of fevers, cholera, scorbutic and putrid diatheses, are arranged in this order. According to him, contagious principles act by a property of dissolution. We need not say here, that we believe the latter not to be founded on these facts alone. He comes afterwards to affections arising either from a deficiency or excess of organic assimilation, and alterations of proportion between the different products of organic assimilation. In the first part of these divisions are arranged plethora, anæmia, hypertrophies, and rickets; in the second, diatheses, which he names uric or phosphatic, gout, and rheumatism. M. Buffalini treats of scrofulous scirrhus and cancerous diatheses under the title of entirely occult, and particular alterations of organic assimilation. In the 29th chapter he considers the dynamic state of diseases, and in the 28th the foundation of classing different affections; after

which he gives the simple classification of diseases.

The whole of diseases he divides in two classes; 1st, those which consist simply in a physical and mechanical derangement of the qualities of organs; 2nd, those which consist in an alteration of the assimilative acts, or vital chemical proceeding.

The orders of the first class are simply three in number; these are changes in relation to the alteration of the textures of organs, and, finally, the presence of indissolvable bodies in organism.

In the second class, the divisions have received names more extraordinary, and are six in number.

Plastauxy, comprehending phlegmasies.

Plastoky, which combines serous diathesis, in which are arranged fevers, asthma, epilepsy, cardialgia, apoplexy, pleurisy, cholera, and a number of other diseases, scorbutic diathesis, and contagious affections.

Polytrophy is the third order.

Oligotrophy is the fourth.

Ataxitrophy is the fifth, which comprehends uric and phosphatic diatheses, and organic transformations or productions.

Finally, *idiotrophy*, embracing scrofulous scirrhus, and cancerous diatheses, also herpetic diathesis.

The indetermined diseases are the nervous, plica Polonica, colica pictonum, convulsive asthma of Miller, and the different kinds of cutaneous diseases.

To use the expression of the Italians, this work is certainly one of the most complete of the school of Mixtionism, and shows much research and ingenuity on the part of M. Buffalini.

Analysis of a Memoir, entitled Researches on Ruptures of the Heart. By J. E. Dereimeris.

Harvey was the first who made known an example of rupture of the heart, and, for a century after the epoch of this great physiologist, a very few cases were described. In the commencement of the 18th century more were observed, and at a little later period, a certain number of authors collected the facts published, and extended the science to a certain point, which since then has not been extended, though the number of cases have been greatly increased *. In considering these cases, as to the different conditions, M. Dereimeris relates them to the following seven heads:—1st, ruptures of the heart from external violence; 2ndly, spontaneous ruptures, without any previous lesion of the tissue of the heart; 3rdly, rupture of some of the walls of the cavities of the heart, without their being previously in a state of dilatation; 4thly, ruptures with probable lesion, but not sufficiently to be described, or positively indicated in the tissues of the heart; 5thly, ruptures from ramollissement; 6thly, ruptures from abscess of the heart; 7thly, ruptures from ulceration or perforation of the heart. The part of the memoir that we have before us, contains the observations belonging to the four first classes. The following are extracts from them. First class,—a man, who wished to put an end to his existence, discharged a pistol loaded with two balls in the chest; there was some contusion about the middle of the sternum; the balls were flattened, the sternum fractured, but without in the least projecting inwards towards the thoracic cavity; the pericardium was filled with blood, and the heart ruptured.—*Journal de Hufeland.* Second class,—the Countess of Nevron, who was extremely robust, had for some time found some difficulty in respiration, whenever she in the least fatigued herself. She came from Nancy to Paris without resting herself. In the evening of her arrival she was taken with dyspnœa, and in the night she died suddenly. Her heart, which was covered to a great thickness with fat, was bathed in blood, which had considerably distended the pericardium; the base of the left ventricle near the origin of the aorta was found ruptured; the tissue of this ventricle was healthy.—*Portal, Mém. de l'Ac. Roy. des Sciences*, 1784. Fourth class,—an old man, 80 years of age, who was brought to the Hospital of Clermont for an oppression about the chest and feebleness, which for some days he had complained of, suddenly died, without having any apparent indication of organic lesion. At the autopsy, M. Fleury found the pericardium filled with blood, and the left ventricle perforated to the extent of ten or twelve lines. The aortic valves, aorta, and other principal arteries, presented numerous points of ossification.—*Bulletins de la Faculté*, t. i., p. 171.

* See the memoir of M. Bland on ruptures of the heart (*Biblioth. Méd.*, t. lxviii., p. 364); the memoir of M. Rostan on ruptures of the heart (Idem, t. lxx., p. 228); a case of spontaneous rupture of both ventricles (*Nouv. Bibl. Méd.*, 1823, t. i., page 365); another case of rupture of the left auricle, succeeding a fall (*Revue Méd.*, 1830, t. m, p. 317), &c., &c.

Analysis of a comparative Memoir on the Natural History of the Itch Insect. By F. V. Raspail.

The whole of this memoir is exceedingly interesting and curious; it is published in the *Bulletin de Thérapeutique*, Sept. 20, 1834, from which we make the following extracts:—

"The first representation published of the itch insect, dated 1682 (*Acta Erudit.* p. 317, tab. 17). In the letter of Joh. Cosme Bonomo, addressed to Redi, and in which are named the first accounts furnished to the author by H. Cestoni, the insect was described in 1687, and the account published, in 1691, in the *Miscel. Nat.*

Curios. This letter contains a full description and a natural representation of the insect. The great observers in the north, such as Schwarmerdam, Leeuwenhoeck, and Réaumur have left nothing which indicates to us that this insect was ever presented to their investigations. It is not surprising that the itch-worm has more particularly fixed the attention of southern authors. Linnæus himself founded his distinction only on the figure of Bonomo; and, as this latter author had given a representation on the same plate, and with the same inaccuracy, of the farina insect, the celebrated Suédois was induced to unite them as a variety of the same species. These two insects are separated, however, by an enormous specific difference. This difference did not escape the celebrated Déger (*Mem. pour Servir à l'Hist. des Insectes*, t. vii. pl. 5), who represented in his turn both the itch and farina insect with such exactitude, that left not the least doubt on the generic difference of these two flesh-worms."

In 1812, an interne of the hospital of Saint Louis announced that he had discovered this itch-worm. Since this epoch, the figures of M. Galés became approved of, and were represented in the elementary works on entomology, and also in the first editions of the work of M. Alibert on Diseases of the Skin. Nevertheless, researches at a later period to those of M. Galés were made by many medical men in vain to discover the itch insect. In comparing the figures of M. Galés with authors of a prior date, M. Raspail was convinced that this gentleman had mystified the faculty in the capital, and that, instead of the itch-worm, he had been clever enough to show them the cheese-worm in a mal-formed state, or the farina-worm heated. In order to better conceal this mystification, it appeared to M. Raspail that it had been again produced in 1829. M. Meynier, pupil of M. Raspail, consequently announced to M. Jugol, who denied the existence of the itch-worm, that he wished particularly to show him this insect; and, in fact, this demonstration publicly took place before a number of medical men, among whom was M. J. Cloquet. Every precaution was taken, so that the impurity of the water might not lead any into error. The glass on which the Galéus pustule was deposited was placed at the end of the microscope; then M. Meynier spread with his finger the liquid, and the gentlemen present, in looking through the microscope, exclaimed that at length the itch-worm, so well represented by M. Galés, *was re-discovered.* "It is what I have seen a hundred times," exclaimed M. Cloquet. When the effect had been produced, we hastened, he states, to make known the discovery of the insect, *seen so well* and by so many at the hospital of Saint Louis, and it was, after all, only a cheese insect which had deceived the whole of the bystanders. M. Galés, since then, has been remarkably silent on this subject. After giving an account of the recent researches made with success from the indications of M. Renucci, M. Raspail passed to a comparative description of the itch-worm, and that of the farina-worm and cheese-worm. We will not enter into the detailed description as regards the difference of these insects, but content ourselves with giving the summary by which M. Raspail terminated this description.

"These considerations causing a separation into two kinds,—the parasite of the cheese and farina on the one hand, and the itch-worm on the other, so that the first may remain in the genus mite (*acarus*) of Lamarck, and the second in that of *sarcoptes* of M. Latreille, with the following characters:—

"Cheese-mite (*acarus*). Corpus ovatum læve, thorace distincto. Pedes primo sex, dein octo sub thorace et circa tuberculum ovatum inserti; ambulacris orbati species; acarus sire, mite of the farina or cheese.

"Itch-insect (*sarcoptes*). Corpus subrotundum utrinque quasi compressum, testutidiniforme, albidum, striatum, supra dorsum papillis rigidis hirtum. Pedes octo, quatuor anteriores circa caput dispositi, et quasi palmati, quatuor posteri distantes, et saltem quatuor anteriores ambulacris præditi."

REMARKS ON THE PATHOLOGY OF HYDROPHOBIA,

As exhibited in the Case that recently occurred in the Charing-Cross Hospital,

To the Editors of the London Medical and Surgical Journal.

Gentlemen,—Without meaning to trespass on any use which Mr. Pettigrew may wish to make of the observations, so ably drawn up and delivered by him on the case, after the post mortem examination was finished, the following pathological observations are the result of reflecting on the train of the morbid phenomena which the disease presented.

I may first of all premise, that dissection has hitherto elicited nothing to elucidate either the immediate cause of the symptoms or that of the fatal issue. We are, therefore, thrown upon the phenomena occurring during life, in order to approach a surmise as to the probable nature and seat of the disease, and this we are enabled to do, in the present instance, with an advantage unequalled before, from the admirable and highly praiseworthy attention that was paid to the sequence of symptoms from the moment the case first came under the care of my friend, Mr. Griffith, and afterwards of Mr. Pettigrew.

Perhaps no instance ever exemplified more strikingly the *auraphobia*, as well as the hydrophobia, than the one we treat of. The dread and intolerance of the least breath of air was of simultaneous appearance with the apprehension of, and inability to swallow, fluids. We are told, that, for some time before either the mental or muscular excitability had

attained any extraordinary degree of intensity, he evinced a most painful degree of sensibility to the least current of air, and this very curious symptom continued even after the proper hydrophobic pathognomon had ceased; for even when moribund and to all appearance dead, blowing with a pair of bellows on his face resuscitated him. His hearing all the while was not morbidly acute, neither was there any intolerance of light; in short, none of his senses, save *that of feeling*, appeared to be involved in the morbid action. In collating, therefore, the pathological characters of hydrophobia this fact stands pre-eminent.

The next prominent circumstance, to which I am desirous of drawing attention, is the state of the muscular fibre. On passing the various symptoms in review, we shall find the most conspicuous in the ranks referable to the condition to which I just alluded, that of strong tonic spasm, affecting a certain set of muscular fibres. We see this exemplified in the continued sense of tightness and constriction felt about the glottis and larynx, extending down the trachea to the air-cells of the lungs, and there occasioning a difficulty of breathing, resembling that experienced in a paroxysm of spasmodic asthma. Now to account for this suite of symptoms, we find a ready solution in referring them to the spasm which affects the muscles of the glottis and larynx, the muscular fibres that unite posteriorly the tracheal cartilages, and those which entirely surround the air-cells where the bronchial cartilages terminate. It seems probable that the diaphragm also is partly involved in the same spasmodic action, and hence the difficulty of breathing, and the feeling of constriction in its situation.

The inability to swallow liquids is to be ascribed to a similar spasmodic state, affecting the muscles of deglutition, and which we shall see to extend throughout the entire of the primæ viæ. Indeed it appears to me that the aversion to liquids arises not from any antipathy to them as liquids, but from the painful spasms the attempt made to swallow them occasions. The patient is early vexed with thirst in this complaint, and is, in reality, desirous of quenching it, but he dares not. The patient, whose symptoms furnished the text for the present remarks, complained of a sensation of a ball at the pit of the stomach, which, to use his own expression, "rose up to the throat when he attempted to drink, and *prevented him*," a symptom, by the way, simulating the globus hystericus.

The next remarkable fact occurring in this case, to show the spastic state of the whole range of muscular fibre, commencing at the stomach and ending with the rectum, was the almost instantaneous evacuation, per anum, of the ipecacuanha that was given to him as an emetic. He said, he "*felt* it running through him," an expression most expressive of two important circumstances, the morbidly acute state of feeling in the bowels, and the morbidly active state of their peristaltic movement.

The tonic spasm which had affected the primæ viæ, was demonstrated in part by dissection, for, on opening the stomach after death, it was found much contracted, and the rugæ on its inner surface very large; while in the middle of the transverse arch of the colon there was a considerable constriction, and its sigmoid flexure and the entire rectum formed one uniform line of contraction.

But this spasmodic tendency of the muscular fibre was not confined to the intestines; it affected likewise those of the bladder, and every time an enema was administered, it produced an involuntary spasmodic expulsion of the urine. That the same state of spastic tone existed in the large intestines, was shown by the immediate and forcible ejection of enemas that were given, unless retained by supporting the sphincter; and this, it ought to be recollected, took place notwithstanding that the enema was of infused tobacco, a medicine eminent for its power of producing universal muscular relaxation. The bladder, I ought to mention, was found after death so much contracted as to form a solid mass.

To illustrate still further the influence which the hydrophobic virus exerts on the nerves governing involuntary motion, I may cite the great irregularity of the heart's action. The pulse was exceedingly variable throughout the whole course of the disease, and although the tobacco enema appeared to control and reduce its velocity, the effect was transitory.

The last observation I have to make is in reference briefly to the state of the mind, which, towards the close of the case, lost its balance; but yet it was not delirium exactly that showed itself, or if it is to be called so, yet it must be accounted a delirium characteristic somewhat of the disease; it more resembled the mental aberration of intoxication, or of some forms of mania, rather than any of the ordinary types of delirium; and, before concluding, I may again revert to what I consider as the most remarkable pathological characters of hydrophobia, viz. the excessive sensibility of the surface to a current of air, constituting the aerophobic symptom, and the excessive irritability or excitability of the muscular fibre, which, in the throat, gives rise to the hydrophobic symptom. With regard to the particular set of muscular fibres *chiefly* affected, I think we may confine them, first, to those of a mixed character; that is, to those that act both as voluntary and involuntary muscles, as those of the glottis, larynx, pharynx, diaphragm, and bladder; and, secondly, to those that belong strictly to the involuntary set of muscles, as the tracheal, bronchial, and cellular fasciculi, the muscular coat of the stomach and intestines, and the muscular fasciculi of the heart.

The disease, therefore, appears to have its seat primarily in the nerves of feeling, and in those motor nerves principally which supply the involuntary muscles.

It remains for further investigation to de-

termine how far the hydrophobic symptom may depend on the auraphobic; for may it not turn out that the current of air carried down the glottis to the lungs gives rise not merely to the spastic constriction of these parts, but likewise is the cause of exciting that morbid state of the muscles of deglutition which revolts at the attempt to swallow liquids?

I remain, Gentlemen,
Your most obedient servant,
G. Hume Weatherhead, M.D.
2, *Parliament-street.*

THE

London Medical and Surgical Journal.

Saturday, December 6, 1834.

HOSPITAL ATTENDANCE.

The following remarks, on a subject of so much importance as the present, will be received, we are convinced, with the same feeling by those to whom they apply, as the tone in which they are dictated. It has long been a crying evil with the pupils in this metropolis, that attendance on the practice of many of the hospitals is almost entirely useless; that the time usually allotted to that part of their studies (from 12 to 2) is almost daily occupied without their obtaining even but a moiety of information, hence such attendance becomes irregular: seeing the various cases but casually, they take no interest in their results. They have not the opportunity of tracing, or of witnessing a careful investigation of the rise of symptoms, or of the progress of the malady; they watch not the effects of remedies, nor understand the post mortem phenomena; so that the knowledge which they really acquire may be said to be negative. Such a system does exist, but is it probable, nay, is it possible, that it can be perpetuated for a much longer period? We trust that its duration is limited, that a final overthrow of it will soon be effected, never to be restored. What are the causes which produce this defective system of hospital tuition? Are they already in existence? If so, how can they be remedied? Let us hear the complaints of the pupils, the aggressed individuals. We have received communications from pupils, both written and verbal, some of them conveyed in the tone of personal invective and animosity against their teachers; others expressing an anxious desire to obtain information, but deprived of the means; but all to the same effect, the incapability of studying disease in the hospitals, under the existing regulations, commensurate with the time they expend and the money they pay. This is a grievous evil, and one which must be averted. There is an old adage, that "a labourer is worthy of his hire," here the converse proposition is peculiarly applicable. Medical pupils are compelled to visit the metropolitan hospitals; and to render them eligible for admission to the Membership of the College of Surgeons, they must study in one of the recognised hospitals for twelve months, or, if having attended twelve months in a provincial infirmary, six months in London, &c. is regarded as sufficient.

The London Hospitals might afford, unquestionably, most abundant sources of instruction, more than adequate to the fees of the pupils, regarded even but in a pecuniary point of view; but when regarded in reference to the future welfare of the rising branches of the profession, and the importance of their being well educated practitioners, that justice may be done to the public, those institutions should be made to confer this important boon on society. Under the present regulations they are but of little utility. In the great hospitals, where pupils often congregate in large numbers, and where the patients are numerous, the surgeon,

for example, goes round the wards, occupying perhaps a minute, or even less, in his examination of each patient, the pupils flock around the bed, anxious but for a glance, and frequently are unable to obtain more; in this manner, from ward to ward, and from patient to patient, they occupy an hour in the middle of the day "in walking the hospital." It is seldom the pupils catch an observation from the physician or surgeon, and, even if they do, it may be so disjointed as not to be available. This is a true picture of attendance on hospitals; it is not, our readers are aware, an hyperbolical description. Abundant are the evidences of its verity. We have witnessed it, and the majority of students, who have come under the College regulations, have felt it. It is true, we admit, that some few pupils derive great advantages from hospital practice, but these are few indeed—they are the favoured ones—or those minds who will, under any circumstances, overcome all difficulties for the love of their profession. But even this information is not always derived from the officers themselves, it is often the result of close personal observation and patient attention. The pupils must unite in one body at each hospital, and demand of the medical officers, surgeons, and physicians, to perform their duties; tell them "we have paid large sums of money, not solely to have the opportunity of running round the wards and seeing the patients, but on the expectation of being taught the mode in which disease is to be investigated, the reasons for employing such and such remedies in preference to others, the effects which are expected to result in each individual case, and, in the event of a fatal termination, to be made acquainted with the probable cause of death, and the nature of the morbid appearances of the body; and, lastly, to be informed how to avoid these rocks and shoals we may meet with in practice in future life. These are the benefits we naturally expected to derive in an attendance on hospital practice." The medical officers of hospitals are *negligent in their attendance*, this is a generally admitted fact. We know it to be so. One surgeon or physician attends once, or sometimes twice, a-week, another twice or three times, and some are so irregular in their visits, that they are never expected until they are seen. There are, however, a few exceptions.

The medical officers of hospitals are usually men who have acquired a good education, and who have had opportunities of seeing disease on an extensive scale; whether they have embraced such opportunities is not the question. The position we must admit; there may be some exceptions. Their election to a hospital brings them before the public in a respectable light,—they are regarded as superior men, and as possessed of experience. Private practice, however, soon occupies the chief of their time; hence, that which they intended to expend in public, and which they probably did at the outset, is thus prohibited. But are the pupils of those institutions, and, what is of equal value—the patients, to to suffer? Are the diseases of the patients to be neglected, and instruction to the pupils withheld, because the surgeon or the physician is too much engaged in private practice?—Assuredly not! Nevertheless, under the present system, such evils must accrue. Where then are we to search for a salutary remedy, provided admonition, nay, even remonstrance, has been applied to the medical officers without avail? to the Governors, the individuals who support those institutions by their liberality and their bounty. Yet,

it will be said, it would be a delicate subject for the Governors to interfere in. It would not! It would be a mere extension of their usefulness to the community, and in no way derogatory. Whatever is a means of improving the education of medical students, who are shortly to hold the "strings of life" of his Majesty's liege subjects in their hands, must inevitably benefit society; must prepare the students to be more competent practitioners. And the same measures which would accomplish this, would be serviceable to the hospital patients. The *Governors* should imperatively demand each man to do his duty. Fix his days, his hours, and on no occasion should he neglect his patients for even one day, without delegating some very competent individual to perform his duties. One step would be thus attained, and by no other means could it be efficiently accomplished. Press of very important matter prevents us from continuing the subject this week, as well as observations on the Anatomy Bill.

DR. STOKES'S LECTURES.

We have discontinued, for the present, the lectures of Dr. Stokes, and commenced with those of Dr. Graves.

A cotemporary has been continuing the former, *in his own language*, in the order in which we are publishing them. He has followed us as closely as possible. In justice to Dr. Stokes, as well as to ourselves, the unpublished and valuable lectures on the chest must be deferred for a short period, but they will appear before the profession, and in an *unmangled* state. We would call the special attention of our readers to Dr. Graves's eloquent and practical lectures on the Institutes of Medicine, lectures not equalled certainly in the English language.

Reports of Societies.

WESTMINSTER MEDICAL SOCIETY.

Saturday, November 15th, 1834.

Dr. Addison in the Chair.

So much time has been already lost in the discussion of extra-medical questions at this Society, and the members seemed so fully aware of the utter inutility of further debate, that we were inclined to hope that no other proceedings would follow, more especially after the satisfactory manner in which the affair was concluded. But the Committee, it seems, were dissatisfied with the conduct of the members; they were unwilling to be considered merely an executive, instead of a legislative, body, and they accordingly came to the determination to resign their office. On the night in question, therefore, each man came prepared with his letter of resignation, many of the more influential members of the opposition being aware of their intentions previously, To avoid any more loss of time, we presume, by having a fresh election, it was determined that the minutes of the preceding meeting should not be signed, thus cancelling the vote against the existence of Vice-Presidents, and undoing all that has been gained by the previous nights.—Truly want of consistency seems to be inherent in the human frame.

MEDICO-BOTANICAL SOCIETY.

Nov. 25th, 1834.

Humphrey Gibbs, Esq, in the Chair.

Rather a rambling, desultory communication by Dr. Hancock, embracing many subjects, was read this evening.

The doctor entitled his paper, "Remarks on Quassia and Strychnos Nux Vomica, considered as Tonic Remedies; on the Medicinal Properties of the Bark of Guaiacum, &c."

Under these and other various heads, almost too numerous to mention, there was a variety of original information, interspersed, unfortunately, with some extraordinary quaint and absurd opinions. While speaking of quassia, which the doctor lauded as a valuable bitter and tonic, he informed us that by some mistake, while the Pharmacopœias all indicated the quassia amara of Surinam and Essequibo to be the real and officinal plant, the shops contained only the quassia excelsa of Jamaica, which possesses very little medical efficacy. Should the learned essayist prove correct in his statement, the fact should be made known in the proper quarter, in order that so great an abuse might be corrected while medical reform was under agitation. The really useful quassia is a beautiful shrub, growing in gardens in Demerara and on the sandy lands

in Essequibo, to the height of six or eight feet and is covered nearly all the year round with scarlet flowers. On the other hand, the quassia excelsa attains to one hundred feet in height, and three or four in diameter at its base. The quassia amara belongs to the class and order decandria monogynia, the excelsa to polygamia pentandria, consequently the botanical distinctive marks are very palpable.

Dr. Hancock recommends the bark of the root to be employed: it is thick and spongy, and possesses a peculiar odour, like some of the cucurbitaceous plants. He considers it to possess tonic, bitter, and febrifuge properties; in large doses, emetic, and occasionally it acts as an anthelmintic.

The essayist condemned the strychnine most energetically, not on account of its powerful action, the chief source of complaint among medical men, but because he considers it uncertain. He remarked that he believed the nut itself to be far preferable to the insulated principle termed strychnine, being a better tonic, less irritant, and more constant in its effects, hence far more safe than the alkaloid. Its medicinal powers, according to the author, are chiefly of a tonic (and sedative?) character. He believes it to be, in small doses (two, three, or four grains), a direct sedative, acting, like Prussic acid, on the nervous system, not affecting the circulation, and inducing sleep without any previous excitement, except it be given in a large dose, so as to cause cramps and spasmodic contractions, as in cholera or tetanus, He remarked, further, that a principal reason for condemning strychnine was that from its high price, as it afforded great temptation to fraud, and could not be obtained genuine. He concluded his observations on the strychnine, by stating that nothing appears to be more preposterous than the present officiousness in vegetable chemistry, or the prevailing rage for separating principles which Nature has joined, to the destruction of many valuable remedies. We ridicule the polypharmacy of the ancients (and justly enough with respect to the Mithridates, &c.), whilst our own is, in many respects, rendered absurd and effete by an affectation of too much simplicity. There is reason to believe, indeed, that the practice of medicine was formerly more efficient than at present, whilst surgery has gained the ascendancy, and cold steel has become the sovereign remedy for ulcerated limbs.

The wood and resin of guaiacum are the only officinal preparations now admitted in the British Pharmacopœia:—these the Doctor considers to be comparatively inefficient, and that the real virtues of the plant reside in the bark, the part employed by the natives of Hayti and South America.

The essay concluded with some observations on the muriate of iron, mercury, and hemlock; of the inspissated juice of the latter the Doctor says he has taken eighty grains at a dose. After that, we were not surprised at the remarks being rather rambling—it is a common effect of an over-dose of hemlock!

Some objections were raised against many parts of the Doctor's essay, after which Mr. Everitt, the Professor of Chemistry, announced that at the next meeting he would deliver a lecture "On the Examination of the Means by which the Strength of Prussic Acid can be ascertained with precision;" a subject he considered to be of the greatest importance, inasmuch as at present the Prussic acids to be met with in the market varied greatly in strength, the difference in some specimens amounting to three times the strength of others, so that if a physician were prescribing Prussic acid, and that of the weakest strength was used, the dose being gradually raised; should it unfortunately happen, that when the dose of the acid was at its maximum the chemist should be changed, and another who professed the strongest acid employed, the consequences might be fatal. Mr. Everitt, in the prosecution of the subject, alluded to the frightful accident at the Bicêtre, when nine persons perished in consequence of a change being made in the acid used. He was of opinion, that such circumstances as these would fully justify the government in interfering, and causing the dispensers of medicine to be placed under surveillance, and that its attention should be directed to the subject, more especially as it is at present engaged in investigating medical reform.

The meeting then adjourned.

LONDON MEDICAL SOCIETY.

Monday, December 1st, 1834.

W. Kingdon, Esq., in the Chair.

Medical Surgery.

An essay by Mr. Dendy, on the treatment of external disease by internal remedies, was read which incidentally gave rise to a most animated discussion, in which Dr. Uwins, Dr. Blicke, Dr. Whiting, Dr. Shearman, Mr. Dendy, Mr. Kingdon, Mr. Greville Jones, Mr. Clifton, Mr. Merrion, &c., &c., took part.

The principal subject of debate was the discovery of the doctrine of local disease having a constitutional origin, the physicians claiming it for their party, the surgeons for Mr. Abernethy, on whom a most deserved eulogium was passed. It was fairly remarked that the physiological opinions of Mr. Abernethy, respecting this particular subject, had met with the usual fate of all fresh discoveries; it was at first doubted, and afterwards, when facts forced conviction, it was then stated, "Oh! all this is true, but it is not new; it was known long since." The physicians considered that Dr. Hamilton, of Edinburgh, who preceded Mr. Abernethy as a teacher and a writer, developed this doctrine in his work on purgatives. The principal speaker on this side of

the question, Dr. Whiting, who had formerly been Dr. Hamilton's clinical clerk, acknowledged that his plan of treatment was very bad, and added, that the cases which were occasionally cured were very long getting well, from the great irritation which his purgative plan caused, and that, in all probability, had they been treated by Mr. Abernethy, they would have recovered much sooner, with less injury to the constitution; so that, according even to Dr. Whiting, Mr. Abernethy was a better physiologist and physician than the doctor. On the other hand, it was contended that Abernethy's views and practice were totally distinct and dissimilar from those of Hamilton. The physician restricted himself solely to the use of purgative medicine, while Abernethy's grand physiological maxim, as published in his lectures and writings, was that there are many organs in the human body, possessing a variety of functions, which may be the cause of local disease, and require a variety of treatment to effect a cure. Hamilton empirically depended on one class of remedies; John Abernethy, guided by the lights of physiology and pathology, prescribed according to the organs which were affected. He also particularly condemned the indiscriminate or protracted use of purgatives, as they excite too much irritation in the system.

One of the physicians present, in drawing the line of distinction between the physician and surgeon, made some illiberal remarks which were totally uncalled for. He remarked that, in former days, the surgeon was merely the servant of the physician, and used to cut off the legs the physician could not cure. All diseases, he said, were then treated constitutionally, by the aid of simples, &c., which were applied and used by the physician. The surgeons, witnessing their practice, copied them, followed in their steps, became pseudo-physicians, and hence arose the blending of the profession.

The remarks we have just recorded were unnecessarily made, and are incorrect. In the first place, there was not any occasion for the physician to remind gentlemen, who are his equals, that their predecessors were the servants of his. Surely he did not expect, at the present day, that they were to do a lacquey's work, and tie his shoestrings for him! But it is a mistaken idea, that the surgeon was the servant of the physician; the fact is, the former was in existence long before the latter, and held very high rank. At the Trojan War, Æsculapius, afterwards deified, and his two sons, Machaon and Podalirius, surgeons to the Grecian army, were princes, and admitted to the council. In those days there were no physicians, for we read, that when the plague devastated the camp, recourse was had to the priest, not to cure them, but to supplicate the offended Deity in their behalf. Physicians were not known until the dark ages, when the cloistered and pampered monk studied the properties of a few simples, and considered himself capable of treating disease. Those he could not cure he turned over to the surgeon; for, according to a canon of the Romish church, no ecclesiastic might shed blood; the surgeon, therefore, was the secular or lay brother of the monastery. Let not, however, the physician boast, that, in the dark ages, the surgeon was subordinate, for in them only could it have occurred. To the surgeon, however, belongs the greater honour, for the lay brother was free from those horrible and detestable vices which stained the catholic priesthood of those days, and which were such as to make humanity shudder. In good truth, the physician need not boast of his ancestry, while the surgeon has not to blush for his predecessors; the former were sunk deep in the mire of vice and superstition, from which some of the old leaven have scarcely yet fully emerged; the latter has gradually raised himself to a pinnacle of glory far beyond that attained by his rival. Every surgeon is now a physician, but few physicians are surgeons.

Rather a caustic remark was made by one gentleman, relative to the knowledge of pathology generally attained by physicians. He showed further, that Dr. Hamilton derived his ideas on the value of purgation from John Hunter, and that Dr. Wilson Philip was preceded by John Abernethy, in the use of minute doses of mercury.

Foreign Medicine.

ACADEMIE DE MEDECINE.

Sitting 16th November, 1834.

Lithotrity in Children.

M. Leroy, of Etioles, read a memoir on the chances of lithotrity in very young children. After having made some remarks on five cases (infants, under six years of age), on which he had performed the operation, four of which were successful, he nevertheless considered that the chances of success increased with age as, at the same time, the difficulties diminished, the contrary of which takes place in lithotomy. The size of the stone is also, of course, a consideration not less important. A calculus an inch in diameter, in a child five or six years of age, would require not less than six or eight sittings, and therefore, evidently, the operation of lithotomy would be preferable.

A Comparison between Lithotrity and Lithotomy.

M. Souberbielle, after detailing to the Academy the numerous cases of lithotomy he had performed, and showing a most splendid collection of calculi which he had extracted, gave the inconveniences of the one (lithotrity), attended with the advantages of the other (lithotomy), and more particularly the high operation; and begged the Academy to appoint

those gentlemen who belonged to their Society, and who had for many years witnessed the success that attended him in his operations, to consider which of the two methods was most applicable in calculous diseases of the bladder. A commission was accordingly appointed.

Syphon of Mr. Sawyer.

M. Ricord presented to the Academy, in the name of Mr. Sawyer, an American physician, a syphon, destined to empty the bladder as fast as the liquid arrived in this viscus, the ingenuity of which he begged the Academy would consider, as he believed it would be an instrument of considerable service in diseases of this organ.

Extrophy of the Bladder.

M. Velpeau presented to the Academy a new-born infant affected with this infirmity.

Use of Digitalis in Epilepsy arising from Fright.

Dr. Nasse states in his lectures, that in epilepsy arising from fright, during the interval of the accession, there is a great increase in the action of the heart. Consequently in several cases he has given with success digitalis, and he also recommends it in all states of the disease in which there is no apparent alteration in the cerebro-spinal system. In some cases he has found its action more beneficial by the aid of small bleedings, and in all he has previously given mild saline purgatives.

An Easy and Speedy Method of reducing Hæmorrhoidal Tumours.

For this purpose Dr. Nasse has also invented an arm-chair, the seat of which is raised, and made to advance forwards, so as to project to the centre of the thighs. The cushion in it is stuffed with horse-hair, and this in shape resembles the back of a sofa, so that by sitting on a chair of this description, the weight of the contents of the abdomen, instead of resting on the sacro-perineal region, is entirely against the abdominal muscles.

He then adds, that in general persons suffering from a descended hæmorrhoidal tumour will sit from five to six hours in an ordinary chair before it has returned, but since he has invented this contrivance, he has observed in almost every case the reduction to take place in the course of an hour or an hour and a half, and in this way he prevents all chances of inflammation and suppuration.—*Horns., Nasse's, and Wagner's Archiv.*

The Bite of a Viper treated with success by the Sulphate of Quinine.

M. Signorelli was called to a man who had been bitten in the foot by a viper, and upon his arrival found him suffering from the following symptoms:—pulse small and jerking, pupils dilated, vomiting, vertigo; this was succeeded by a state of comatose, interrupted by a state of convulsive movements. He had no appetite, and his bowels were confined. It was two days previous to this that he had received the bite; blisters had been applied, but in spite of this the disease continued to increase till Dr. Signorelli saw him. This gentleman prescribed two grains of the sulphate of quinine, to be given every two hours in a teaspoonful of wine. After the first dose of this medicine, the sensation of vomiting disappeared, his bowels became open, and his appetite became better. This medicine was continued for five days, the disease appeared checked, and nothing more was done, with the exception of the application of a simple cataplasm. Dr. Signorelli considered this preparation of bark as a specific in this disease, and believes in cases of necessity larger doses might be more immediately given with beneficial advantage.

Dr. Signorelli observes that after witnessing its beneficial effect in more cases than one, he believes its modus operandi to be attributed to the re-action it produces, thus giving rise to a species of fever which combats and neutralises the depressing action which the poison of the viper exerts over the heart and arterial system.—*Filiate Sebegio, Luglio* 1834.

The Best Means of Preparing Cantharides.

The cantharides when alive are placed upon a glazed earthern pan, and a filament of lavender, or any other labiated plant is placed upon it. These insects thus soon die, and are then dried in an oven. M. Piette, a pharmacien at Toulouse, proposed this method, and states that the flies by this means have a beautiful green colour, and other insects will not attack them for many years; the active principle, the cantharidine, is thus preserved.

Iodine used Endermically in cases of Partial and General Dropsy.

M. Coster enumerates in a memoir several cases of partial and general dropsy which he has treated with iodine used in the following way—hydriodate of potass, gr. vj., iodine, gr. iii., water, ℥j., six minims of which he commenced for a dose, and increased it to fifteen in sugar and water; the beneficial effects were especially observed when applied externally by the endermic method, by dressing blisters, which he applied on the inner surface of the thighs, with an ointment of half a drachm of the hydriodate of potass, fifteen grains of iodine, and an ounce of lard, and also daily rubbing it in on the soles of the feet, and in the arm-pits. M. Coster terminates his memoir by a few remarks, showing with what facility iodine traverses the organic tissues; by injecting into the bladder of a dog a solution of starch, and also into its rectum a solution of iodine, when he states that the urine contained in the bladder of the animal in a very short time became of a blue colour, and

also by leaving the bladder in a normal state, and injecting solely iodine into the rectum, the same phenomenon is produced. The colour may again be observed, if the animal's urine is put in a solution of starch.

Composition of the Atmosphere.

M. A. Chevallier having been engaged for some time in discovering the composition of the atmosphere, gave in a lengthy memoir which he read before the Academy, the following results of his researches:—

1st. Generally the atmospheric air of Paris, and also in many other cities, contains in dissolution ammonia, and organic matter.

2nd. If the water be collected that is deposited, in consequence of the coldness of the atmosphere, the presence of ammonia and organic matters is discovered in it.

3rd. The quantity of ammonia which exists in the atmosphere, is sometimes very considerable.

4th. The presence of ammonia is easily explained, in consequence of the production of this gas taking place under a number of circumstances.

5th. The composition of atmospheric air may vary in different localities, in consequence of a number of peculiar circumstances, the nature of the combustibles employed, in large masses, the decomposition of animal and vegetable matters employed, &c., &c.

It is in consequence of these circumstances that the atmospheric air of London contains sulphurous acid, and that the air from the drains in Paris is impregnated with the acetate and hydrosulphate of ammonia.

Cure of a Case of Hydrophobia.

BY DR. MOESNER, OF GAILDORF.

The following is a most remarkable case, and its cure might be somewhat attributed to the cauterisation of a vesicle situated under the tongue.

M. F., forty-four years of age, was bitten on the 18th of February, 1833, in the right hand near the fourth muscle of the thumb. The small wounds were scarified, and washed with liquor ammoniæ; some time afterwards they were again cauterised with the potassa fusa, and dressed with simple ointment.

In spite of this, on the 25th, the patient was attacked with pains in the wound, which extended up the arm to the chest and to the heart. This was succeeded by lassitude and vomiting; at first, twitches in the arms, which extended to the head and trunk. Bleeding to a pint. Emetics. Pulv. Doveri, gr. x. h. s.

The next morning the pains following the direction of the nerves, converged towards the spinal marrow; there were nausea, convulsions, stiffness, and twitchings in the neck and back. V. S. ad 3vj. An alkaline hot-bath. Blister-ointment and cataplasms to the wound. Mercurial frictions to be applied on the affected arm every three hours, and the root of the powder of belladonna, cantharides, sulphuret of antimony, and calomel, of each one grain, to be given in sugar every two hours.

During the day he had many convulsive fits; acute pains in the hand and arm; a sensation of heat in the chest, which he felt run all over his body; difficult and unequal respiration; eyes and mouth occasionally closed, but not spasmodically; slight flexion of the elbows; acute pains, and general tremor of the body. He could not swallow; the least attempt caused much spasm and constriction of the œsophagus; begged not to go into another bath; pulse hard and firm. (Alkaline lotions applied to the body. V.S. to ℥ viij.)

Feb. 29th. Dizziness; spasm of the tongue extending to œsophagus, but is neither thirsty, nor has difficulty of deglutition. On the left side of the tongue was discovered a small recently broken vesicle, which was immediately canterised. The point and base of the tongue were also rubbed with potassa fusa, and in the evening the spasm, which previously was almost incessant about the base of the tongue and throat, had nearly ceased.

March 2nd. About 5 o'clock this morning he became suddenly almost powerless, an impossibility to drink, and the effort that the patient made to swallow caused him violent convulsions followed by a burning heat in the chest. The spasms again ceased on the re-application of the caustic.

On the 3rd, in the evening, violent spasms of the glottis ensued, and there did not appear a chance of saving him. However in the night nearly the whole of the symptoms subsided, and he found not the least difficulty in deglutition. The next day the nervous symptoms became less.

By the 1st of April the patient had quite recovered; the wounds in the hand were kept in a state of suppuration for forty-eight days, and he has had no relapse up to the present day. Slight salivation had been produced.

British Hospital Reports.

ST. THOMAS'S HOSPITAL.

Compound Fracture of the Tibia and Fibula —Laceration of the Knee-joint—Amputation—Death.

On Sunday, Nov. 21st, Benjamin Coxar, æt. 32, was brought to the hospital in consequence of external injury to the left leg. It appeared, from the statement of those who conveyed him to this Institution, that in attempting to pass from one barge to another he missed his footing, and his left leg became jammed between the two barges. At the time of admission there was extensive compound fracture of the tibia and fibula, the bones forming the knee-joint had become literally smashed, and the popliteal artery was lacerated. Mr. Green was immediately sent for, and upon his arrival, on examining the parts, proposed immediate amputation of the limb,

When about to proceed with the operation, Mr. Green remarked, that in cases of this description there was, in general, immense retraction of the integuments and muscles, in consequence of the strong healthy condition of the man previous to the accident. The limb was removed about the centre of the thigh, by means of the double flap operation; and although the operator took the precaution of making lengthy flaps, yet the retraction was so violent, that it became necessary to divide the bone a second time. Considering the violence of the shock the system must have received from the extent of injury, and then the after shock of an operation, little hopes were entertained of his recovery.

On Monday and Tuesday there was a sanious bloody discharge from the wound; the patient's strength and nervous powers were gradually excited by means of opium and ammonia. He complained of slight pain in the stump, and his pulse was very compressible. On Wednesday, the 26th, Mr. Green saw him for the third time after the operation, the patient then expressed himself as feeling tolerably well; the discharge from the stump was becoming of a more healthy character, still there was a great anxiety of countenance, and his pulse indicated the feebleness of his nervous power. Bowels had not been open since the operation. Mr. Green consequently ordered him some castor-oil, to be taken the following morning. At this time there was some hope of the powers of life over-balancing the shock the nervous system had received.

The next morning, the castor-oil not being sufficient to relieve the constipated state of his bowels, some calomel and colocynth were administered, which produced two or three evacuations, and in the course of the evening the man died.

Now, in this case, there can scarcely be a doubt as to the immediate cause of death. The man, on the Wednesday, was going on remarkably well; his pulse, although easily compressed, had a degree more power than on the day previous, showing that nature was still struggling to overpower the violence of the shock she had received; and it would appear the means she adopted to thus aid herself was by lessening all the natural excretions, for there was dryness of skin, no alvine evacuation, and scanty discharge of urine; but, on the administration of the purgative, the very means she had recourse to for the preservation of strength was destroyed, and life no longer could exist. The purgative was thus, we believe, administered too early; but, if it had not been given, the fatal termination in all probability would have taken place, though not so early; and, we believe, in all cases, whenever a severe shock is conveyed to the system, either by an operation or from an accidental injury, at least for the first seven days no purgative should be administered. Many severe operations have we seen terminate fatally that have been going on for two or three days exceedingly well in the different hospitals of this metropolis, and death could be attributed to nothing more than a too early evacuation from the bowels.

ST. GEORGE'S HOSPITAL.

Case of Stricture, (continued from p. 511.)

In continuation of our report of this case, we may notice that for many days after the performance of the operation, the man (Clarke) remained in a very unsatisfactory state as regarded his constitutional symptoms, his pulse being irritable; the general temperature of the skin raised; the tongue dry, and of a deep red colour, better known as a beef-steak tongue, and generally indicative of a high febrile state of the stomach; the countenance was also flushed and exceedingly anxious. He was kept quiet in bed, and he removed the plug from the catheter whenever he felt an inclination to void his urine; his diet was light, and the urine being acid, and there being great thirst as well, he was ordered for medicine a solution of carb. sodæ ℥ ij., in aq. menth. pip. ℥ x. The case having excited an extreme degree of interest among those gentlemen who attended more particularly to Sir Benjamin Brodie's practice, he delivered a clinical lecture upon the case, from which we extract the following remarks. After alluding to the general history and features of the case, Sir Benjamin Brodie observed:—

"It became evident to me that the urethra in which the stricture was situated was not the only part diseased, for the mucous membrane of the bladder and the prostate gland were affected by the constant presence of the urine in straining to evacuate the bladder, and the kidney became affected as well. I took a cast of the stricture on a soft plaster bougie, and I found that its orifice was at the upper part of the canal. This is a fact which you most commonly meet with in cases of stricture, and your success in passing an instrument will mainly depend on whether you keep its point against the upper surface of the urethra or not, as without you attend to this rule, you may fail in curing the most common case of stricture. If, by following this plan you do not succeed, when you reach the stricture draw the instrument a little out, and then press it back again.

"Well, in this manner I endeavoured to pass the instrument in this case; sometimes the spasm of the stricture would be relaxed, and I could pass a very small instrument, and at the next essay all attempts would fail. I attributed the difficulty to arise from the extreme pressure *behind* the stricture. I then thought of applying caustic to the stricture, which was done several times, and with but slight relief, which soon went off.

(*To be continued.*)

ROYAL COLLEGE OF SURGEONS.

Names of Gentlemen who received Diplomas during the month of November, 1834.—Alex. Ure, Charlotte-street, Bedford square; John Jones, Neweastle Emblyn; Charles Bennett, Commereial-road; John Bryden, Manehester; Wm. Jones, Bristol; Wm. Fisher Moore, Preston; Henry Dunning, Baileaberow, Co. Cavan; Francis Burnett, Aberdeen; Wm. Apjohn, Limerick; Thos. William Trotman, Barbadoes; Fred. H. Clark, London; James Pattison, ———; Abraham King, Bridgewater; Henry P. Jones, Pembroke; Wm. Brebner, Jamaiea; Arthur Wm. English, Hull; Gay Shute, Meeklinburgh square; John Hand, London; John L. Craigie, ———; Henry Harvey, Newcastle-upon-Tyne; John Hughes, Llanrwst; Henry H. Harrison, ———; Henry Wooldridge, Winehester; George T. Fogarty, Drogheda.

APOTHECARIES' HALL.

Names of Gentlemen to whom the Court of Examiners granted Certificates of Qualification on Thursday and Saturday, 27th and 29th November:—Samuel Gamble Willcox, ———; Alfred Hall, Grange House, Derbyshire; Nieholas M'Cann, London; Robert William Smith, Bristol; Henry Davenport, Egham, Surrey; James Henry Wells, Cheltenham; Robert Whitmore Clarke, Margate, Robert Dent, Aylsham, Norfolk; Henry Prout Jones, Pembroke; Frederick Richard Hitch, Melbourne; William Barnard, Bramdean, Hants; Thos. Harwood, Boston; Reginald Orton, Bombay; Percival Leigh, St. Cross, Winehester; Franeis Paekard, Middleton, Suffolk; Robert Burdsall Lyth, York; Robert Craven, Wakefield; Thomas Lavery, Manehester.

APPOINTMENTS.

Naval.—Mr. James Lawrenee, surgeon, and Mr. R. T. C. Scott, assistant-surgeon to the Pique. Mr. H. Goldney, surgeon, and Mr. W. Pattison, surgeon to the Rover. Mr. John Bowler and Mr. R. R. Arnott, assistant-surgeons to the Victory. Mr. A. Johnstone, assistant-surgeon of the Melville, to be surgeon of the Hyaeinth, v. Pattison, deeeased. Mr. J. E. Goodridge, assistant-surgeon to the Water Witeh. Mr. Hopley, assistant-surgeon to the Actæon.

Military.—Assist.-Surgeon Hume, of the 84th Foot, to be surgeon of the 43rd Foot, in plaee of Galeani, appointed to the 28th Foot. Dr. P. Russell, assistant-surgeon 76th Foot, in place of Ferguson, appointed to the 1st West India Rangers. Dr. Alex. Black, assistant-surgeon 84th Foot, in plaee of Hume, appointed to the 43rd. Assistant-Surgeon Dr. Ferguson, from the 76th Foot, to be surgeon of the 1st West India Rangers, in place of Savory, gone on half-pay. Dr. Henry Handley and Dr. Henry Drummond have been appointed assist.-surgeons to the forces, in place of Hutton and Damerum, deeeased. Mr. W. Wilton, surgeon of the South Glouecster Militia, in place of Shrapnell, deceased.

General.—Dr. Sheill, physieian, and Mr. Malone, apothecary, to the New Lunatie Asylum, Clonmel. Mr. Baker, of Leeds, medical superintendant of factories in Mr. Rickard's district. Dr. James Dunlop, of Baker-street, assistant-physieian, and Mr. E. Cutler, of Saekville-street, assistant-surg. to St. George's Hospital. Dr. Feild, physician, and Mr. Walter Jones, surgeon to the Woreester Dispensary.

DEATHS.

Mr. Henry Hunt, of 15, Lower Brook-street, Grosvenor-square. In Dublin, M. Tod Byrne, Esq., secretary to the late Medical Board. At Roekhampton, Glouecstershire, Mr. Thos. Jones, surgeon, formerly of Iron Aeton. Mr. Lewis Leslie, late assistant-surgeon of the 45th Foot. Dr. Arthur Garry, of Knocksteigne, Co. Kildare. Assistant-Surgeon Ewing, half-pay, 13th Dragoons. Dr. Watson, assist.-surgeon at the Royal Military Asylum, Chelsea. In Jamaiea, Staff Assistant-Surgeon John Hutton, 56th Foot. Mr. James Lyle, of Glasgow, surgeon. Dr. William Chandler, late of Canterbury. Dr. W. B. Millar, of Dundee. Mr. John Marshall, surgeon, of Willington, Northumberland. At Old Calabar, Africa, Mr. Wm. Close, surgeon. Mr. Richard Jackson, surgeon, of Welton, Yorkshire. Mr. Henry Jones Palmer, surgeon, of Liverpool. Dr. R. A. Thetford, of Douglas, Isle of Man.

WEEKLY BILL OF MORTALITY.

London, Tuesday, Dec. 2, 1834.

Age and Debility	52	Inflammation of the Bowels & Stomaeh	5
Apoplexy	8	Inflammation of the Brain	3
Asthma	20	Inflammation of the Lungs and Pleura	6
Childbirth	5	Insanity	6
Cholera	1	Jaundiee	1
Consumption	70	Liver, Diseased	5
Convulsions	40	Measles	25
Dentition, or Teething	5	Mortifieation	7
Dropsy	22	Paralysis	1
Dropsy on the Brain	8	Serofula	1
Dropsy on the Chest	2	Small Pox	12
Dysentery	1	SoreThroat&Quinsey	1
Fever	7	Spasms	2
Fever, Searlet	13	Thrush	3
Fever, Typhus	3	Unknown Causes	7
Gout	1		
Hæmorrhage	1	Stillborn	16
Heart, Diseased	6		
Hooping-Cough	20		
Inflammation	23		

Males 203 Females 214 Total 417

Deerease in Burials reported this week 17

Books for Review and Correspondents in our next.

METEOROLOGICAL JOURNAL.

MONTH. Nov., 1834.	Moon.	Thermom.			Barometer.		De Luc's Hygrometer.		Winds.		Atmospherie Variations		
27		39	47	38	29·75	29·73	77	80	S.W.	S.W.	Fine	Fine	Fine
28		47	48	41	29·56	29·24	80	81	S.S.W.	E.	——	Rain	Rain
29		44	50	40	29·06	29·10	81	80	S.S.W.	W.S.W.	——	Fine	Fine
30	☽	47	52	43	29·37	29·50	82	84	W.	W.S.W.	——	——	——
Dec.													
1		49	51	45	29·08	29·23	80	76	W.S.W.	S.W.	Showry.	Showry.	Showry.
2		51	51	41	29·52	29·73	76	77	S.W.	W.S.W.	Fine	Fine	Fine
3		45	49	44	29·87	29·96	87	96	S.W.	S.W.	——	——	——

The quantity of Rain fallen in November was one inch sixteen-one-hundredths.

50, *High Holborn.* WILLIAM HARRIS and Co.

All Communications and Books for Review to be forwarded (free of expense) to the Publisher, 356, Strand, near King's College.

THE

London Medical and Surgical Journal.

No. 150. SATURDAY, DECEMBER 13, 1834. Vol. VI.

LECTURES

INTRODUCTORY TO THE COURSE OF THE

INSTITUTES OF MEDICINE,

DELIVERED BY

ROBERT J. GRAVES, M.D.,

King's Professor, Dublin.

LECTURE II.

Gentlemen,—I spoke yesterday of the extent of life, and showed you, that not only do we find earth, air, and ocean peopled with myriads of beings, but that a great proportion of the solid crust of the globe is composed of the infinitely numerous remains of those animal vegetable tribes, which existed in remote ages; to-day I shall endeavour to explain the position of man in the scale of life, and for this purpose shall read part of a former lecture, after which I shall consider the very interesting subject of the influence of physical agents on vitality.

First, then, with regard to the formation of man and the rank he occupies. In her operations on inanimate matter, nature pursues a system, which gradually rises from what is simple to what is complicated; in the organisation of living beings the same law is universally observed. In the lowest tribes we find an organisation the most simple combined with what may be termed the *unit* of life, and, as we ascend in the scale, we find that organisation more complicated, and the display of vitality more extensive and more intense.

This law is illustrated, whether, directing our attention to the formation of the living body, we observe the embryo of the most perfect animal from its commencement, and watch all the various and successive changes it undergoes during its progressive development from its original state of rudimental mucus to that final and complicated arrangement, which consists of tissues so dissimilar in their composition and structure, or of organs exhibiting such an endless variety of shape and texture; or, whether, turning from mere matter, we view its actions as influenced by the principle of life, and examine the effects of this new agent, scarcely discernible in the nascent embryo, which conceals the first spark of vitality, but in the perfect *man* not less astonishing as the cause of his corporeal functions, or as intimately associated and connected with the human intellect.

The *physiology of man* includes that of the inferior orders of animals, whether we consider his vital functions, the mechanical arrangement of his tissues, or the chemical composition of his body. In all these points man forms the summit of the series. In him we find the results of a chemical composition the most refined; in him its products are the most animalised and most varied; in the structure of his body we observe displayed all the wisdom of mechanical and physical contrivance; and in him are found all the varieties, all the actions, of vitality, from those inherent in the scarcely animal zoophyte to those performed by the most perfect animal.

In studying physiology, then, we must ascend from the simple to the compound, from the lower orders of animals to the human species. Man was not created at a distance from the rest of living beings, no marked and determinate barrier separates him from the other inhabitants of this world; he enjoys like them corporeal vitality, and like them his body withers and dissolves under the hand of death. His high degree of organisation is not attained at once; he commences similar to an animal of the lowest order; but the human embryo contains within it elements which impel it beyond the first state of vitality; it assumes a higher form of arrangement and composition, and with these it discharges more numerous functions; it rises from step to step, and its organs, in the progress of their formation, are analogous to those of a successive series of inferior animals. This I shall have occasion to explain more at large when we come to speak of the development of the fœtus and of human monsters, an important and instructive subject, for the very irregularities of nature often afford the most useful commentaries on her more regular proceedings.

But if our bodily formation is thus connected with the lowest orders of animals, is there nought in man which is peculiar to him? Does the human species enjoy no particular

attribute, no special mark which at once separates and exalts it above its fellows? Or is man endowed with no quality which ought to rescue him from the humiliating classification of the natural historian, and vindicate for him a place apart from the subordinate genera of the mammalia of Linnæus? Yes, a consideration of the manner in which the human species has obtained a degree of *knowledge* and *power* so much above all other animals will prove, that, although intimately connected with them in bodily formation and development, man is separated from them by a well marked line. The same Power that breathed into man's nostrils the breath of life, infused into him a portion of that divine intelligence, which, although infinitely minute when compared with the omniscience of the source from which it was derived, is yet more than sufficient to exalt him so far above the rest of living beings, that he rises into a distinct class, and by the sole gift of reason is constituted the lord of the creation.

Let us now consider more closely the senses man possesses, and the means by which they have been made subservient to the exertion and improvement of his reasoning powers. Placed amidst an endless variety of external objects, man feels himself excited by an internal impulse to enquire into their various qualities and relations, for the perception of which nature has bounteously granted him senses, few in number, but comprehensive in application. Two of these senses, the touch and taste, are destined for the examination of objects brought within our immediate contact; while the senses of smelling, hearing, and vision, extend the range of our observations, and convey information concerning certain physical properties of distant bodies. Of these the sense of touch, including taste, which may be considered a modification of it, conveys the most numerous notices concerning the physical qualities of bodies, serving to reveal the flavour, temperature, superficial configuration, general shape, and consistency of matter. The touch, too, is the sense most constantly and unceasingly employed; for our material bodies always in contact with matter can never entirely escape from its immediate influence, and amidst the silent darkness of night, the senses of smelling, hearing, and vision may lie dormant and unexcited from the absence of their proper stimuli, while the sense of touch as long as we are awake continues its wonted activity. This sense, too, with all its various modifications, and all the varieties of internal sensations to which it gives rise, preserves its relative importance in disease as well as in health, and thus forming the chief basis not only of our bodily pleasures, but also of our bodily pains, has been considered of all our senses the most closely connected with matter. Hence it has been the boast of philosophers to decry its pleasures as sensual, and inculcate fortitude under its sufferings.

Modern metaphysicians, however, seem determined to raise the sense of touch in the intellectual scale, and, acknowledging it to be the most extensive, have endeavoured to prove that it is also the most exact of all the senses; and many have gone so far as to constitute it the corrector of the ideas derived from other senses, such as vision; and some have attributed the pre-eminence of man to the exquisite sense of touch with which his fingers are endowed.

When we come to speak of the physiology of the senses, we shall have occasion to examine this opinion more at large, and to prove that the sense of touch is as fallible as the rest. At present it is sufficient to remark, that the various senses have each separate claims for pre-eminence as sources of intellectual light. Thus, vision claims the merit of being intended not merely for the direction and guidance of our bodies or the contemplation of terrestrial objects alone; it requires not immediate contact like the touch, nor, like smell and hearing, maintains a communication with bodies placed within limits comparatively narrow; no; vision, overleaping the bounds of this world we inhabit, carries us information from distances scarcely finite, ranges from planet to planet and from star to star, and seems peculiarly intended by the Creator to intimate to us the infinity of his works.

But let us not, therefore, inconsiderately depreciate the intellectual value of the other senses, or forget what we owe to reason, a gift of the Creator still more precious than even sight. Has the mind of man in its conversation with the heavenly bodies been limited to the sense of sight? Because we have not touched or felt, are we ignorant of all other physical properties of heavenly bodies except their form, as disclosed to us by vision? Has not our reason supplied the place of contiguity, and enabled us to estimate the distance, the relative size, the weight and density of these remote worlds? Do not many other animals possess senses as numerous as man, and do not several enjoy a higher development of particular sensual organs, and possess finer and more numerous instincts than have been allotted to human species? Let us not, therefore, attribute solely to these senses the intellectual pre-eminence of the human race. The sun is not invisible to other animals, nor are the countless stars of the firmament hidden from their view. These objects are seen by them but not understood; they make an impression on their senses, but this impression not becoming the subject of reasoning and reflection, the perceptions admitted through the agency of the senses serve merely for the guidance of their bodies, and are scarcely converted into food for the intellect. And so it was with man in the infancy of the human species, before his reflective powers, aided by experience, enabled him to avoid the errors his sensations would have led him into if implicitly relied on. Although man in his primitive state stood erect, and seemed, from the

very position of his body, formed to contemplate the heavens, yet, for ages, his notions concerning what he saw were confined to direct deductions from the testimony of vision. The shepherd remained as ignorant of the distance or size of the heavenly bodies as the flocks he tended; and century after century passed away before man became aware that the stars are not small lucid points fixed on a solid vaulted firmament, before the science of astronomy, while it proved the immensity of the sphere of vision, proved likewise the fallacy of that sense. And so it is likewise with our other senses, for, although they are the original sources of all our acquired ideas, and, consequently, of our knowledge, yet, in the first instance they are the most fruitful sources of error. Many of the deductions we appear legitimately to draw from their evidence, a persevering application of our reasoning powers, guided by further experience, afterwards detects to be erroneous, and yet (as in the instance already referred to with regard to vision) so strong and so intuitive appear those primary deductions, that they have in many instances survived for ages; and had not man been created a social being capable of communicating his ideas to his fellow men, it is more than probable he never would have emancipated himself from the erroneous thraldom of his senses, and thus the natural sources of intellectual light would have been converted into sources of intellectual darkness. Happily, however, the power of inventing *sounds* to communicate his ideas, and *signs* to record them—Language and the Art of Writing—have extended the sphere of mental exertion from the narrow limits of individual minds to the collective intellect of the species.

In order justly to appreciate the intellectual importance of the sense of hearing,—in order to estimate how much the human intellect owes to language, and the collective exertions of which language is the instrument, it is only necessary to study the progress in knowledge one individual, unassisted by this instrument, is capable of attaining. We need only refer to the intellectual condition of him who, being born deaf, is thus separated from the rest of his species by a double barrier, which, on the one side, prevents him from communicating his own ideas and sensations to his companions, and, on the other, shuts him out from the benefit of their reflections and experience. It is true he has the use of all his other senses, the other inlets for sensations and ideas are all open; he *sees*, but the various objects which attract his regards and fix his attention are to him a vain and useless show, of which no voice affords an explanation. When a child, the deaf man labours under all the errors of childhood; and, when he has become a man, few of these errors have been removed; he scarcely knows that he had a beginning, for this knowledge he could only receive on the testimony of others, and suspects not that he is to have an end. The awful word *death* has never sounded in his ear, nor do the forebodings of a future state awaken in him any anxiety. He has feelings, sensations, and some ill-defined, indistinct, natural emotions, but he knows not that others have similar feelings or ideas. He consequently can feel neither the pangs of sorrow nor the consolations of sympathy; he shares not the griefs of his companions, nor unloads his own breast by imparting his misfortunes to a friend. In short, he is completely insulated, his sensations and ideas have reference to himself alone; and, thus circumstanced, he presents the extraordinary spectacle of one externally conforming to the manners and usages of refined society, but who is completely ignorant of human laws, customs, and religion; and, what is still more remarkable, he is almost completely insensible to all those affections which form the golden links of the social chain. Compare the condition of the uneducated deaf and dumb with that of the tribes which occupy even the lowest scale among barbarians; compare them with the Guaranis of South America, who, as the apes of their native forests, live in trees, from which, like parasitical animals, they derive both habitation and nutriment, and the comparison will be much in favour of the latter.

Before we turn from this humiliating picture, let me remark that it ought to afford an instructive lesson, not only to the metaphysician and philosopher, but to him also, who, foolishly proud of his own intellectual powers, forgets what a vast portion of his knowledge he owes to one frail sense, by which he has been enabled to borrow from others. It has been truly observed, that the senses of smell and taste seem more subservient to the body than to the mind. A man might be born without either, and yet grow up to attain the most extensive range of human knowledge; whereas, were he born at once destitute of sight and hearing, his body might be matured, but in his intellectual attainments he would scarcely exceed the lowest orders of animals. The loss of these senses in old age may be partly recompensed by the memory or imagination; but the want of them in infancy almost totally prevents even the dawning of the mental faculties.

In the human subject we sometimes meet with very singular instances of malformations, by means of which one or more senses are absent. Thus, in a curious and interesting case by Mr. Davies Gilbert, late President of the Royal Society, it is related of a young lady who had attained the age of seventeen years, but who, shortly after birth, became perfectly deaf, and also blind, that she never acquired anything like the power of voluntary motion. She had never held up her head, raised her hand to her mouth, or set her foot on the ground. Although lean, still she was of good stature. She was never heard

to utter anything like an articulate sound, and a feeble cry or whine, the only sound heard from her, was believed to indicate the want of food. In fact, she exhibited proofs of possessing only two out of the five senses—taste and touch—and the latter very imperfectly. Thus, all the avenues to knowledge being closed, her mental development was completely prevented, and she afforded the miserable spectacle of a human being, endowed with animal life and perfect to the eye in bodily conformation, but totally destitute of intellectual development.

Having stated the obvious proposition, that in man the want of the more important senses, as the sight and hearing together, will cause the human mind to sink in the intellectual scale even below many of the lower animals, we should not forget the equally obvious truth, to which, indeed, I have already adverted, that many animals have their senses as perfect as man; and, nevertheless, in mental powers are so far inferior, that they may be considered as placed at an almost immeasurable distance below him. This observation applies to the whole class of mammalia, in many of which the hearing is more acute, the sight sharper, and the smell more perfect than in the human being. The only senses man seems to possess in a greater degree of development than all the rest of the mammalia, are the sense of taste and touch; but we have already seen that this superiority, when considered with reference to the intellect, can be of little importance. Happy had it been for mankind, had their intellectual progress been only interrupted by those natural difficulties that for a time impede, but finally strengthen, the powers of the common intellect. But man is social in his passions as well as in his reason; and the frame of society has been at times so fearfully convulsed by the baneful influence of the former, that more than once has the human mind retrograded, more than once has night suddenly and unnaturally reappeared, and more than once have ages of darkness returned to brood over the intellectual world, after a period when the daylight, though young, seemed firmly established.

To the historian belongs the interesting task of reviewing the different causes which have contributed to produce the ebbings and flowings, the manifold retardations, and the varying phases of the human mind. It will be sufficient to remark here, that its progress since the invention of the art of printing, has become steady and uniform. The stream of knowledge, which not many centuries ago, shallow and narrow, toiled painfully to wear away or avoid the obstacles that impeded its course, now fed by a thousand new sources, flows along deep and rapid, sweeping away every obstruction, and defying all human opposition. Mankind being thus arrived at the maturity of collective intellect, we are every day surprised at the results obtained by the vast mass of mind now diligently employed in the acquisition of knowledge. What was formerly the termination of a science is now but its commencement; what was formerly deemed unattainable is now elementary; so that it is impossible to foresee how far improvements may be carried. A short and transitory existence has been allotted to our bodies; individuals die, and generations pass away, but the common intellect of mankind fears not the same fate, nor shares the same brief mortality.

Having laid before you a general view of the geography of life, and the quantity of vitality existing on this earth; having also endeavoured to point out what are the general marks of difference between man and other animals, I shall now allude to the particular subject of this day's lecture, and commence with the consideration of the influence of physical agents on the different classes of beings. Having already given an idea of the extent of life, let us now inquire what it is that limits this extent, that causes life not to be universally diffused and every where the same.

Physical agents which affect life may be divided into two classes; first, those which always exist and are termed constant, from whose influence living bodies cannot be withdrawn, and which also act on dead matter. We find that beings endowed with life are subject to the influence of laws which regulate the condition of dead matter; thus we find solidity, fluidity cohesion, gravity, and the laws called chemical are always in operation. These are the constant physical agents, the principal causes always at work and never ceasing in their action. The second class of physical agents are those which act with not less power than the former, but which vary in their intensity, and from one of which, as, for instance, light, the body may be subtracted altogether; as to the remaining, namely, heat, electricity, and air, no human body can be wholly removed from them without danger. On a general view of the subject, the operation of the first of these influences seems to have limited life to the surface of the earth, the outer crust of which is the sole habitat of life, the remaining solid matter of the earth being, with regard to the support of life, totally useless.

The physical agents which do not vary are the same in all climates. Their influence, which is so permanent, seems also to be so necessary, that were any one of them to be altered, the whole living machinery of the earth would stop from the animalcule to the whale, and from the byssus to the oak. If water were to become solid at 100° instead of 32°, no living being as now constituted could exist. If gravity were diminished on the earth, a thousand inconveniences would be felt by all, and though we do not see any reason why life should cease at once, as in the

former instance, still the amount of inconvenience would be enormous and intolerable. Thus if it were suddenly reduced to the force which it exerts on some of the ultra-zodiacal planets, as Ceres and Pallas, "a man could spring with ease sixty feet high, and sustain no greater shock on coming to the earth than he does now from leaping a yard. Giants might exist, and that enormous animal the whale, which now requires the buoyant power of water to counteract its weight, might then be a denizen of the land."—*Herschel.* I might bring forward many other illustrations, but shall not dwell on these matters, as they are sufficiently obvious and generally known.

With regard to living beings, it may be observed, that, as a general law resulting from the constitution of the terrestrial surface and of matter, animal life must, as to date, follow vegetable. Some think there are exceptions to this law in the case of carnivorous animals who do not subsist on vegetable productions. But these live upon other animals, which in their turn devour others; the latter, however, are found to live on vegetables. Vegetables always constitute the last link of the chain of nutrition, and are the chief laboratories used by nature for the support and reparation of living matter. Many of the lowest grades of animals seem to possess a power similar to that of vegetables; thus we find that some species of the mollusca appear to possess the power of feeding on rocks composed of carbonate of lime. But this power ceases as we ascend in the scale, and the more perfect animals subsist only on matter that has passed through a system of other living beings. This appears to be the law not merely regulating the development as to date of animal and vegetable life at present, but seems to have existed since the creation; for, on examining the strata of which the earth is composed, we have abundant and satisfactory proof that vegetable preceded animal life by many centuries, and that it flourished in full luxuriance long before animals were called into existence. As to extent, it is obvious that vegetable life, constituting the food of animal, must exceed it in extent, and if all the animal matter existing in the world at any particular period were weighed, it would be found inferior in weight to the vegetable matter existing at the same period.

Let us now consider life as existing in the air, the waters, and on the earth, as far as the varying physical influences will permit it. First with respect to light. We know that the permanency and integrity of those physical influences which are constant, and always act with the same degree of intensity, are essentially necessary for the existence of living beings, but it becomes a question whether the varying influences, as, for instance, light, be equally indispensable. Can any living thing, animal or vegetable, subsist in utter darkness? Some, perhaps, would answer, no doubt there may; and would cite the example of the seed buried under ground, so that no light can possibly approach, and yet the process of germination goes on*; or you would refer to the fœtus in utero living and growing in utter darkness. But you should recollect that the seed has received a certain stock of food and latent life from the parent plant, and that the fœtus is ultimately connected with the system of the mother. It might be urged that animals have existed for a very considerable period without light, as toads in wood and certain kinds of rock, in which it has been proved that they must have remained for a long time in darkness. This certainly is the case, and it is true that those animals were alive though long deprived of light, but it was only a suppressed kind of vitality; life was preserved, but not in its natural state of intensity. There are but very few facts to prove that any animal or plant can or does exist in places totally destitute of light. In perfectly dark caves, though moist, ventilated, and affording, by the streams which pass through them, entrance to seeds, we never find any thing but the least organised cryptogamic plants, such as Byssus evanida, Mucor decumanus, and very often not even these or any other species of vegetable. It is true that Humboldt asserts, that lichens have been found even in caverns which have been closed up, and have had no communication with the surface. Thus he saw, in a cave which had just been broken into at Muggendorf, the beautiful stalactites covered with lichen tophicola. The occurrence of Byssus in perfectly dark places, as seen by Pallas in a cave in Siberia, is not so conclusive, for such matters seem to be more the result of new arrangements among the particles of previously organised and living animal and vegetable matter, than new and individual forms of vegetation. Their life appears to be traditional and limited, and the stock appears to depend on that laid up by the previously living plant or animal. Hence it is that we so often observe the Byssus on the fæces of different animals. The extract which I have just quoted from Humboldt appears very singular; I have never in the course of my reading or observation met with anything like it; as to what has been stated by Pallas respecting the Byssus, I am ready to admit that it might happen.

But next comes the question with respect to the animal and vegetable tribes that inhabit the deep. It is a fact acknowledged by those who study physics, particularly the laws which regulate the transmission of light, that the rays even of a vertical sun do not penetrate more

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* "It is well known, indeed, that seeds will not germinate in the light; this is caused by light decomposing the carbonic acid gas, expelling the oxygen, and fixing the carbon, whence all the parts become hardened, a condition under which vegetation cannot proceed.—*Lindley's Introduction to Botany.*

than one hundred fathoms below the surface of the sea. If, then, we assume, as there is reason to believe, that the ocean is several miles in depth, some thinking it to extend to ten, others, nearer the truth, limiting it to three or four, observe what a striking image it suggests to the mind; a vast portion of the surface of our globe covered by waters which light never penetrates, where a fluid black as night has for ages brooded over its bed in unbroken darkness! If to this idea, so well calculated to heighten the horrors of the deep, we add, that if light be necessary for the existence of animal and vegetable life, we have the equally awful idea of an immense tract of ocean-depths, whose loneliness is undisturbed by the presence of any living being, and where the eye of the imagination can only picture to itself a black and desolate mass of fluid, not only uninhabited but uninhabitable.

To-morrow, gentlemen, we shall discuss these and several other points connected with the influence of physical agents on vitality.

LECTURES

ON

MIDWIFERY & THE DISEASES OF WOMEN AND CHILDREN,

BY EDWARD RIGBY, M.D., F.L.S.,

ASSISTANT PHYSICIAN-ACCOUCHEUR TO THE GENERAL LYING-IN HOSPITAL.

Delivered at St. Thomas's Hospital.

LECTURE XI.

Changes in the Generative Organs after Conception, &c.

Gentlemen,—At my last lecture I endeavoured to show you the various grades of development which the generative organs exhibit in the scale of animal life *, let us now examine the changes which these organs undergo in the human female, after sexual intercourse for the first time, after conception, and during pregnancy.

Upon the occurrence of sexual intercourse for the first time, that membranous septum, which is stretched across the vaginal entrance, viz. the hymen, is ruptured, and more or less destroyed; its remains will be found to consist of three or four small and usually triangular appendages, arising commonly from the sides and back part of the vaginal entrance, and from their peculiar form anatomists have given them the term of *caruncule myrtiformes*. The presence of the hymen, perfect and uninjured, has been usually considered as a proof of virginity, and the contrary state as a proof that sexual intercourse has taken place; but, nevertheless, this cannot be looked upon as a means of diagnosis upon which we can place any reliance, since it has frequently happened that, after repeated sexual intercourse, this membrane has remained entire; whereas, on the other hand, it may be destroyed from many causes, as from external violence, burns, and even ulceration from the small-pox pustule; it may even have been defective as an original mal-conformation. Numerous cases have been recorded of conception even having taken place without destruction of the hymen. Mauriceau has related two cases of this sort: first, in the case of a woman, aged 35, who had married an old man of 70, and became pregnant for the first time; when labour came on, the aperture was found so small, as not even to admit his finger; he left it entirely to nature, and, as the head descended and began to distend the perinæum, it soon yielded. In the other case the patient was much younger, and she was only in her third month of pregnancy when Mauriceau was consulted about her; the orifice was not larger than a quill, but how her pregnancy terminated we are not informed.

The changes which take place in the vagina after sexual intercourse are much more equivocal and uncertain: the passage is said to be dilated, and its rugæ more or less obliterated; but these marks cannot be depended upon. You will remember that, when speaking of leucorrhœa, I told you that the number and size of the rugæ, and the contracted state of the vagina, would chiefly depend upon the patient's general health, so that the size of this canal will not afford any certain signs of sexual intercourse having taken place.

The vagina, as you are aware, consists of two coats, a fibrous and a mucous one; the former is thin, firm, and of a reddish colour; it resembles the fibrous coat of a large artery more than any structure with which I am acquainted, and is continuous with the fibrous or proper tissue of the uterus itself, becoming less vascular but more firmly attached as it recedes from the os uteri. The other membrane is a part of the mucous membrane which, externally, is continuous with the skin, internally, with the lining membrane of the uterus; it is plentifully supplied with mucous glands and follicles, which moisten the internal surface of the vagina with their secretion, and which, during sexual intercourse and pregnancy, but more especially during the early stages of labour, furnish an abundant supply of colourless inodorous mucus to lubricate the passage; this also acts as a topical depletion, and is a most important means in rendering the vagina more capable of undergoing that enormous degree of distension which is necessary for the passage of the head. The mucous membrane of the vagina presents much the same appearance as that which lines the other distensible cavities of the body; it is puckered into a

* The previous lecture, here alluded to, has been unavoidably omitted for the present, on account of the quantity of illustrations required.

number of rugæ, or folds, which is an arrangement peculiarly fitted to bear, without injury, the violent distension to which it is occasionally subjected, and is one of the many beautiful illustrations of design in adapting the structure of the part to the purpose for which it is intended; the rugæ of this membrane, more especially in the virgin state, are gathered, as it were, into two lines upon its anterior and posterior surface, called the *columna rugarum, anterior et posterior.*

The vagina has generally been supposed by authors to play no active part during labour, and in no wise to assist the uterus in expelling its contents; in fact, the mere passive function of an elastic tube has usually been assigned to it. This opinion has not only been opposed by many men of the highest rank in their profession, such as Wigand, Baer, and Naegele, but it is also controverted by many striking facts, some of which I will enumerate to you. In nates presentations, we find, that when the arms are fairly in the vagina, they are frequently expelled with considerable force; this is observed to be the case also with the head, especially where the birth of the child has not been hurried, and where the chin has remained pressed upon the breast; we frequently see the same expulsive force displayed in abortion and the discharge of coagula; but in no instance is it so strikingly exemplified as in those rare cases where the head has been separated from the body and left in utero, and where, after various attempts to extract it have been made unsuccessfully, it has in a short time afterwards been expelled by the natural powers. This cannot be the result of elasticity, nor can it be produced by the contractions of the uterus, which at this moment, with the exception of the placenta, is empty and contracted upon itself. From the similarity which the fibrous coat of the vagina bears to that of the uterus, and from being in continuity with it, there seems reason to presume that it also undergoes a similar alteration in structure during pregnancy, by which it is enabled to put in action that powerful expulsive force when distended by the presence of the head or body of the child.

I now pass on to the formative organs. At the time of puberty the human ovary undergoes considerable changes, which fit it for the function nature has destined it to perform. The structure of the gland becomes much more vascular; the vesicles of De Graaf, which are not visible till the seventh year, become more numerous, and one or two may be generally observed peculiarly prominent and developed. Upon impregnation taking place, one or more of these vesicles swell and burst, discharging its contents in the funnel-shaped extremity of the Fallopian tube, which, by means of its fimbriated edge, firmly grasps this part of the ovary. Till lately, the vesicles of De Graaf were supposed to secrete fluid analogous to the semen of the male testicle; because, from the small size of the Fallopian tube, it was evident that the Graafian vesicle itself could not pass through the tube into the uterus. The remains of the ruptured vesicle form a round, glandular, yellow-coloured body, called *corpus luteum.* (Several drawings and preparations were here shown to illustrate it.) Its structure is soft, and, on close inspection, appears to consist of minute lobuli; it projects from the surface of the ovary, usually attaining the size of a large pea; it contains a cavity which opens externally, and the number of corpora lutea corresponds with that of the newly-formed ova.

Although De Graaf asserted that he had been enabled to detect ova in the Fallopian tubes, and although this has been since confirmed by the observations of Dr. Haighton and Mr. Cruikshank, still the opinion of the most eminent physiologists has been hitherto opposed to it, and the glandular body, which I have just described under the name of corpus luteum, was supposed to secrete that fluid which formed the contents of the vesicle, and which was discharged into the Fallopian tube. The original opinion of De Graaf has, however, been strikingly confirmed by the late interesting researches of Dr. Baer, of Königsberg. On examining the larger vesicles of an ovary, he was enabled to detect the presence of an ovum in them, similar to what De Graaf, Dr. Haighton, and Mr. Cruikshank had described as having found in the Fallopian tube. "On examining the ovaria attentively (says Dr. Baer), before any of the vesicles had been opened, I could distinguish a whitish-yellow spot in almost every vesicle, which was evidently floating loose in the fluid which formed the contents of the vesicle. Being induced, by curiosity more than by the hope that I had been able to detect the presence of an ovum with the naked eye through the coverings of the vesicle, I opened it, and raising the little corpuscule upon the edge of my knife, placed it under a microscope."

We have no cause whatever for supposing that a vesicle of De Graaf can be converted into a corpus luteum, merely by strong excitement of the venereal passions. Nor does the fact of corpora lutea having been found in very young and even new-born animals, as asserted by Sir Everard Home, at all tend to controvert this opinion, because there is no reason to consider every yellow spot in the ovary as a corpus luteum. In those cases where a genuine corpus luteum has been found in unmarried females, who, from the structure of the parts (physically considered) were distinctly virgins, it may be supposed, from what I have said when speaking of the hymen, that an effectual sexual intercourse had taken place nevertheless; and I am strongly inclined to look upon all those cases where the corpora lutea had not corresponded with the number of fœtuses as very doubtful and uncertain.

Meckel, who has examined the ovaries of more than two hundred pregnant animals of the class mammalia, has always found that the number of corpora lutea corresponded exactly with that of the young produced; and the observations of Haller, Hunter, Blumenbach, and other distinguished physiologists, agree with him. Dr. Montgomery, in the "Cyclopædia of Practical Medicine," says, that he has never in any one instance seen the corpus luteum having the real characters belonging to it, except in females who had been previously impregnated, and who had conceived; and that such a corpus luteum was never found in a virgin animal. "These virgin corpora lutea, as they have been called, may be distinguished from those of impregnation by the following marks:—1st. There is no prominence or enlargement of the ovary over them; 2ndly, the external cicatrix is wanting; 3rdly, there are often several of them in both ovaries, especially in patients who have died of tubercular diseases; 4thly, they cannot be injected; 5thly, their texture is so infirm, that they seem to consist of the remains of a coagulum, and at other times appear fibro-cellular, and resembling the internal structure of the ovary; but in no instance did we ever see them presenting the rich and regularly glandular appearance, which Hunter meant to express when he described them as tender and friable like glandular flesh. 6thly, they have neither the central cavity nor the radiated cicatrix which results from its closure." As the cavity of the corpus luteum diminishes, it recedes from the surface of the ovary, becomes hard, and the opening into it closes. The period of time necessary for these changes varies considerably. In general, both in man and other animals, they are not very remarkable whilst pregnancy lasts, but when this is over they proceed more rapidly. This seems to result from a cessation of that increased activity in the uterine circulation which lasts only with pregnancy.

Although the ovary had been distinctly noticed by Fallopius as early as 1561, nevertheless, Fabricius ab Aquapendente, Professor of Anatomy and Surgery at Padua in 1600, was the first who gave an accurate description of this organ. Still the function of the ovary was little known; it was supposed to secrete a fluid analogous to the male semen, and was therefore called the *testis muliebris*. This opinion continued in vogue until the time of Steno, a Danish physician, who, having dissected a skaite, was led to suppose that what had hitherto been called the female testicle, was nothing less than a genuine ovary. "When I first discovered (says Steno) that the testes of viviparous animals contained ova in them, and remarked that their uterus opened into the abdomen like an oviduct, I could no longer doubt but that the testes of women were analogous to ovaries." This opinion was afterwards confirmed by the researches of Regner de Graaf, a Dutch physician, who described and delineated the organs of generation with a degree of accuracy and fidelity which had hitherto been unequalled. In the engravings which illustrate his work are representations of ovaries, both of the human species and animals, laid open, and the Graafian vesicle demonstrated. "I confidently assert (says De Graaf) that I found ova in every genus of the animalia, which may be distinctly seen not only in birds, fishes, and oviparous animals, but also in quadrupeds and man. The common use, therefore, of the female testes is to generate ova, and to nourish them till they arrive at maturity; for this reason I should be rather inclined to call them ovaries than testes."

Although De Graaf asserted that he had seen ova in the Fallopian tube, still he seems to have confounded the ovum with the Graafian vesicle, or at least not sufficiently to have distinguished them; nor does he appear to have had any distinct idea respecting the contents of the Graafian vesicle, and that it was *the ovum which was contained in the vesicle*, and not the vesicle itself which escaped from the ovary and descended through the Fallopian tube into the uterus. The fact of ova being found in the Fallopian tube, although confirmed by Dr. Haighton and Mr. Cruikshank, has been denied by Malpighi and Haller, and still later by Meckel and Sir E. Home. But the accuracy of De Graaf's original observations has been fully confirmed by the late interesting researches of De Baer of Königsberg, as I have already mentioned to you.

That the Fallopian tubes are the canals by which the ovum is conveyed from the ovary into the uterus, has been proved by the experiments of Dr. Haighton, who found that impregnation never took place in an ovary where the Fallopian tube of the same side had been previously tied or divided. The Fallopian tubes experience considerable changes after conception, inasmuch as they implant themselves upon the ovaries, so as to embrace them with their rugous fimbriated extremity, which at other times lies free and loose in the abdomen. From the experiments of Mr. Cruikshank, the Fallopian tube is found firmly attached to the ovary, either during sexual intercourse, or when the animal is at heat. "The Fallopian tubes," says Mr. Cruikshank, "independant of their black colour, were twisted like writhing worms, the peristaltic motion still remaining very vivid; the fimbriæ were also black, and embraced the ovaria (like fingers laying hold of an object) so closely and so firmly, as to require some force, and even slight laceration, to disengage them." (*Various preparations were here shown to exhibit the vascularity of the Fallopian tubes.*)

The broad ligament, which is merely an extension of the peritoneum from the sides of the uterus, undergoes no peculiar changes

after conception, but as pregnancy advances, and the uterus increases in size, it becomes completely spread over its surface, and therefore were we to search for this ligament at the ninth month, we should be disappointed; its duplicatures are all separated and laid smoothly over the uterus; it will therefore be evident that we can no longer find the ovaria and Fallopian tubes floating loose in the pelvis, or the round ligaments running out at an angle from the fundus uteri to the groin. All these are contained within the duplicatures of the peritoneum or ligamentum latum, and therefore when this is spread over the uterus at the ninth month, it follows that the ovaries, tubes, and round ligaments cannot now run out loosely from the uterus, but must be laid flat upon its surface, and bound down by the stretched peritoneum; in the latter months of pregnancy, therefore, the Fallopian tubes are to be found running down, clinging to the sides of the uterus, with their fimbriæ spread out upon its surface *. These fimbriæ, or *morsus diaboli*, as they have been called, and which frequently disappear in old age, are now thicker and more distinct than formerly, and the tubes are softer and more vascular; a tolerably large probe may be passed along them, until it comes to about an inch from the uterus, where it is stopped by the decidua.

The round ligaments, like the tubes, run down close by the sides of the uterus, and are thicker, rounder, and softer, than formerly; they are likewise so vascular, that they seem to consist of nothing but vessels, and may readily be made turgid by injecting them from the internal iliac arteries. From infancy to the adult age the round ligaments rise from the sides of the fundus uteri, but after the first labour they are situated more or less anteriorly, and this in proportion to the number of children which the patient has had.

LECTURES
ON
FORENSIC MEDICINE,
DELIVERED BY
DR. HAY GRAHAM,
At the Westminster School of Medicine.

LECTURE IX.

Rape.

GENTLEMEN,—We now enter upon the consideration of rape, or the defloration of virgins, a crime which has ever been considered of the highest magnitude amongst civilised nations, not only on account of the indelible injury and disgrace inflicted on the unfortunate female on whom the violence has been committed, but also because it loosens the bonds of morality, and is an outrage on society in general.

For these reasons this crime has ever been visited by the severest punishments. Under the law of Moses it was punishable by death. "If a man find a betrothed damsel in the field, and the man force her and lie with her, then the man only that lay with her shall die. But unto the damsel thou shalt do nothing, for he found her in the field, and the betrothed damsel cried, and there was none to save her."—*Deut.* xxii. 25. But if the young woman was not betrothed, the ravisher was obliged to pay a fine of fifty shekels of silver to the father, and to marry the girl, without having the subsequent power of divorce. Among the Athenians, rape was punished by death; indeed they carried their rigour to such an excess, that even a kiss taken by force was expiated by the loss of life. Under the Roman law of Constantine it was punished by death and confiscation of goods, but under the limitation of an option granted the young woman, that the ravisher should either suffer death, or marry her without a portion. "Rapta raptoris aut mortem aut indotatas nuptias optet." This limitation gave rise to a legal question of some difficulty; if a man were to ravish two virgins on the same night, one might require his death, the other might desire marriage; "una nocte quidam duas rapuit, altera mortem optat, altera nuptias." The Roman law also punished with death the accomplices, and compelled the parents to prosecute under pain of banishment and loss of citizenship. The Greek republics very properly made a distinction between the rape of a prostitute and that of a virgin or of a virtuous woman; the Roman law altogether rejected the complaint of a prostitute; whilst our English law has fallen into the opposite extreme, and makes no distinction between the rape of a virgin, and of that degraded mercenary being who prostitutes her favours to every comer; surely there can be no violence offered to that modesty which has been long since abandoned, no consequent loss of future happiness, no degradation lower than that sink of vice into which she has voluntarily plunged herself; but our law charitably supposes, that at, or just previous to, the commission of the crime she might have had a fit of virtue come over her, have repented of her evil courses, and intended to lead a new life; she is, therefore, to be treated with all the delicacy and respect due to a virtuous woman, and the man to be punished accordingly.

Under the feudal system, that is, during the dark ages, the ages of ignorance and chivalry, this crime does not appear to have been viewed in such a heinous light. At this we need not be surprised, when we reflect how great must have been the laxity of morals at a time the proprietors of the soil exacted "les droits du seigneur" from the daughters of their abject villains or serfs. Yet by the laws of Charlemagne, whoever violated the daughter of his lord was punished by death. "Si quis filiam domini sui rapuerit, morte moriatur." By the establishment of St. Louis, a lord seducing his

* Burns on the Gravid Uterus.

vassal's daughter entrusted to his guardianship, lost his seignory, and a vassal seducing the daughter of his lord forfeited his land. By the laws of Burgundy, for the crime of abduction, or forcibly carrying off a young woman, the ravisher was to pay six times her price on legal valuation, and a fine of twelve shillings in addition, and, if unable to pay these sums, he was to be delivered to the parents and relatives, to be punished as they might deem fit. It is an old law maxim, and still observed, "qui non in crumenâ habet, in corpore luet," that corporal punishments are convertible into fines, and where fines cannot be paid the body must suffer.

It is related that "by the Welsh laws of Howell Dhu, if two women were walking together, and violence was offered to one or both of them, it was not punishable as a rape, because the one might have assisted in protecting the other. If a man committed a rape which was either proved or confessed, then the perpetrator, besides full satisfaction to the woman, was to pay a fine to his sovereign, consisting of a silver stand as high as the king's mouth, and as thick as his middle finger, with a gold cup upon it, so large as to contain what he could take off at one draught, and as thick as the nail of a country fellow who had worked at the plough seven years. If the offender was not able to make such a present, he was to lose the offending member, "virilia membra amittet." Hence we may infer that by the Welsh laws rape was punished by castration. The laws of Ethelbert, the first Christian king of Kent, ordered a fine of fifty shillings to the parent or guardian of the young woman, and a further compensation for herself equal to her ransom; if she were married, to make an additional payment of twenty shillings to the husband; but if she were with child, the fine was to be increased to five and thirty shillings, and fifteen more to the king. There is an ordinance of Alfred for the punishment of rapes on country wenches who were servants, an offence which appears to have been very prevalent at that time. If a husbandman commit a rape upon a bondwoman, he shall pay sixty shillings to the girl, and five shillings to her master. If a bondman commit a rape on a bondwoman, he shall pay for it by the loss of virility, "compenset hoc virgâ suâ virili;" and this punishment was ordered to be inflicted on any one who might have illicit connexion with a child of tender years. By the old Saxon, Gothic, and Scandinavian laws, rape was punished by death. But this was afterwards thought too hard, and, instead, another severe, but not capital, punishment was inflicted by William the Conqueror; viz. castration and loss of eyes. The Constitutio Criminalis Carolina, or criminal code of Charles V., enacted it a capital offence punishable by death. The edict of Francis I. even prohibited asking pardon for this crime. Henry II., by his ordinance of 1557, condemned any one, who should force a woman or a girl, to be hung or strangled. Among the ancient customs of the Isle of Man, we find the following: if a man ravish a wife, he must die; if a maid, the dempsters (that is the judges) deliver to her a rope, a sword, and a ring, and she is then to have her choice to hang, behead, or marry him.

"In the reign of Henry III. it was enacted that the woman should immediately after, '*dum recens fuerit maleficium*,' go to the next town, and there make discovery to some credible person of the injury she has suffered, and afterwards should acquaint the high constable of the hundred, the coroners, and the sheriff, with the outrage. This seems to correspond, in some degree, with the laws of Scotland and Aragon, which require that the complaint must be made within twenty-four hours; though, afterwards, by statute Westm. 1, c. 13, the time of limitation in England was extended to forty days. At present there is no time of limitation fixed; for as it is usually now punished by indictment at the suit of the king, the maxim of law takes place, that 'nullum tempus occurrit regi;' but the jury will rarely give credit to a stale complaint. During the former period, also, it was held for law, that the woman (by consent of the judge and her parents) might redeem the offender from the execution of his sentence, by accepting him for her husband, if he also was willing to agree to the exchange, but not otherwise." —*Blackstone*, b. iv., p. 211.

"In the third year of Edward I., by the Statute Westm. 1. c. 13, the punishment of rape was much mitigated; the offence itself of ravishing a damsel within age (that is, twelve years old), either with her consent or without, or of any other woman against her will, being reduced to a trespass, if not prosecuted by appeal within forty days, and subjecting the offender only to two years' imprisonment, and a fine at the king's will. But this lenity being productive of the most terrible consequences, it was ten years afterwards (13 Edw. I.) found necessary to make the offence of forcible rape felony, by statute Westm. 2, c. 34. And by statute 18 Eliz. c. 7, it is made felony without benefit of clergy; as is also the abominable wickedness of carnally knowing and abusing any woman child under the age of ten years; in which case the consent or non-consent is immaterial, as by reason of her tender years she is incapable of judgment and discretion.

"A male infant under the age of fourteen years is presumed by law incapable to commit a rape, and, therefore, it seems, cannot be found guilty of it."—*Blackstone.*

"The civil law seems to suppose a prostitute or common harlot incapable of any injuries of this kind; not allowing any punishment for violating the chastity of her who hath, indeed, no chastity at all, or at least hath no regard for it. But the law of England holds it to be felony to force even a concubine or harlot, because the woman may have forsaken

that unlawful course of life."—*Ib.* vol. iv. p. 212.

"The law of England justifies a woman killing one who attempts to ravish her, and so, too, the husband or father may justify killing a man who attempts a rape upon his wife or daughter; but not if he takes them in adultery by consent, for the one is forcible and felonious, but not the other. Yet this homicide may be excusable though not justifiable. And there seems no doubt but the forcibly attempting a crime of a still more detestable nature may be equally resisted by the death of the unnatural aggressor; for the one uniform principle that runs through our own and all other laws seems to be this—that where a crime, in itself capital, is endeavoured to be committed per force, it is lawful to repel that force by the death of the party attempting it."—*Blackstone's Com.—Fonb.* v. i. p. 416.

As no accusation is more easily made than for the crime of rape, it is a most important point to prove that it has been actually committed; and much difference of opinion has taken place in respect to the exact legal definition of this act. Some have defined it *penetratio penis cum emissione seminis*, which constitutes carnal knowledge. Lord Coke defines carnal knowledge to be "*penetratio*, that is, *res in re*, but the least penetration maketh it carnal knowledge;" yet many judges have denied that carnal knowledge was necessary to be laid in the indictment, but only that the defendant ravished the party. By the 9th Geo. IV. c. 31, it is enacted "That as offenders frequently escape by reason of the difficulty of the proof, it is not necessary to prove the actual emission of seed in order to constitute a carnal knowledge, but that the carnal knowledge shall be deemed complete upon proof of penetration only." At first this enactment was construed as merely relieving the prosecutrix from the necessity of proving the completion of the offence according to the old law; because, if the essential fact of emission was explicitly negatived in the evidence, the prisoner must be acquitted of the capital charge. And it might easily be conceived that a young woman, or a child of tender years, might, either from the great perturbation of mind, or from being in a state of insensibility, or from ignorance, be unconscious of that fact, and therefore could not swear positively to it. However, in subsequent cases, the judges have decided that this statute not merely affected the evidence, but altered the character of this offence; and therefore, as well in prosecution for rape as for carnal knowledge of infants, and unnatural crimes, the capital offence is complete if penetration be proved, although emission be negatived, and this although the hymen be unbroken, and the vagina continue so small, that even a finger could not be introduced; and perhaps as an eunuch and an infant under the age of fourteen may be capable of penetration, though not of perfect emission, he might, since the last enactment, be convicted of a rape or unnatural offence.

"Under the existing law capital punishment is the result, although there have been an incomplete assault and the slightest introduction of the male organ *infra labia*, without further penetration, or the slightest laceration or actual injury of the vagina, and although seminal discharge be clearly negatived."—*Chitty*, p. 379.

A woman who has been completely violated, even by such violence as she was unable to resist, is in a manner disgraced, or, rather, no longer retains her virgin purity in the estimation of society, and there is a feeling of delicate reluctance in most men from taking such a female in marriage, which does not exist to the same extent in a case of assault where the sexual intercourse was incomplete according to the former law of rape, which drew a line of demarcation between *ineffectual attempts* completely to violate, and the completion of the offence. Under the present law no such distinction is made, and, as the punishment is the same, there is an additional inducement to complete the perpetration of the crime. It is therefore doubtful how far this alteration in the law has been wisely framed, and whether some further change would not be advisable.

Having now, gentlemen, taken a sufficiently luminous view of the law of rape, we will enter upon the physical consideration of the subject, according to our proposed plan.

As this crime is most frequently committed on a virgin, it will be proper first to enumerate the signs of virginity.

The presence of the hymen has ever been considered the most convincing proof of virginity; yet there are many cases on record of women being pregnant, and on the point of delivery, without this membrane having been ruptured or lacerated; and since we have shown that a woman may be impregnated without the introduction of the organ of virility, it follows, physically speaking, that a virgin may conceive. The hymen has been found entire in girls who have been ravished, which can easily be conceived when we remember that its density is variable. Fabricius de Aquapendente makes mention of a girl whom all the students of a college in vain attempted to deflower. Ambroise Paré saw a hymen which had acquired an almost bony consistence.

Unfortunately, this membrane forms no criterion: it is frequently altogether wanting, or it may have been destroyed otherwise than by sexual intercourse; as violent and sudden motions, riding on horseback, fluor albus, or a clot of blood during the first periods of menstruation, in addition to which we may add masturbation.

The carunculæ myrtiformes offer as little proof, whether we consider them as the remains of the hymen, or as existing naturally and replacing this membrane. The rugæ

vaginales, the colour, tension, and firmness of the external parts of generation, may undergo no change either by one or several coitus, especially should there be no great disproportion between the organs of generation in the man and in the woman, and any slight bruises would disappear in a few days.

The effusion of blood during the first coitus (which is the Mosaic test of virginity) is considered a certain proof. Yet how many exceptions are there to this rule? The frequent and abundant returns of the menses, the fluor albus, and many other causes may relax and enlarge the parts. However, as a general rule, the old maxim may be considered true, "Prima Venus debet esse cruenta;" but as much may depend on the size of the *membrum virile*, a woman who has not appeared a virgin to her first lover may appear such to her second, the effusion of blood may take place several times, or it may be feigned by spots made on purpose, or by the menstrual discharge.

Until the age of puberty, the orifice of the vagina is very narrow, and afterwards, in a healthy person, it will scarcely admit of the introduction of the finger, since it has no other office to perform than to allow of the discharge of the menses. Consequently the first coitus is always painful, especially if the hymen has not been ruptured. Yet too much importance ought not to be attached to this circumstance, because an immodest girl, of deceitful chastity, might, by pretending pain and using astringents, pass herself off for the most simple and timid virgin.

But when the external organs of generation are firm, tense, of a bright carnation colour; when the labia pudendi are close and cover the orifice of the vagina; when the fourchette, the fossa navicularis, and the nymphæ are entire; when the orifice of the vagina will scarcely admit the finger, and the hymen is unbroken, we may consider the young woman a chaste and spotless virgin. But though the hymen may be wanting, yet if the other signs are present there is great probability of her chastity, and it merely remains to ascertain whether the carunculæ myrtiformes are the remains of a hymen, and, if so, how long they have been formed.

Some physicians have attempted to establish other marks than those which the organs of generation afford, by means of which they might ascertain whether or not defloration has taken place. But one has only to enumerate them to perceive their absurdity: such as that the voice becomes hoarse and fuller; that the body and the urine exhale a peculiar odour; that the countenance is marked with spots; and the neck thicker, but that, if it can be surrounded by a thread, equal in length from the point of the nose to the re-union of the sagittal and lambdoidal sutures, the girl has not been deflowered. It was a custom among the Romans, when a girl was married, for her nurse, or some other woman, to measure the circumference of her neck with a thread in the presence of the wedding party; the next morning, on entering the bride's chamber with some of her relations, the neck was again measured with the same thread, and if found too short the nurse, or mother, cried out, transported with joy, "My daughter has now become a woman." Catullus refers to this custom in the following verses:—

> "Non illam nutrix, orienti luce revisens,
> Hesterno collum poterit circumdare filo."

Carolo Musitana, an old Italian physician, asserts, that he has repeated the experiment of the thread above a thousand times, and has never known it to fail. But this can be of no use in cases of rape, as it is not to be supposed that the exact measure of the neck was taken just previous to the commission of the crime; besides many sources of error might be pointed out, such as the want of consent of nature, so that in no case could it be depended on. Another pretended mark is a livid circle round the eyes, and the white of the eye faded, or of a dull colour. These and other such like appearances, when present, are often the effects of disease, or may proceed from other causes.

It may here be mentioned, that it is reported of Democritus, who, having one day saluted a maid, the day following saluted her as a woman, recognising, by the appearance of her countenance, that since he last saw her she had consented to lose her virginity.

There is also an account of a monk at Prague, who could recognise people by smell, as others do by sight, and who could thus infallibly distinguish any maid who was chaste from such as were not so. Another instance of delicacy of smell is related of a blind man, who had two daughters, and by this means became sensible that one of them had allowed her lover to take such liberties as are only permitted between man and wife.

I need not repeat, that the presence of the hymen has ever been considered the surest test of virginity. For this reason Diana, the goddess of chastity, was always represented with a crescent, worn over her head, as emblematical of the usual semilunar appearance of this membrane.

To return from these digressions to the consideration of this complicated subject, whether or not a girl has been violated, we should pay attention to the following observations of Orfila:—

1st. That among the signs of defloration, those *only* which are taken from the condition of the organs of generation are of any *certain or determinate value*. 2nd. That any one of these signs, taken separately or apart from the rest, is by no means sufficient, but they must be all viewed together, in order to be able to form a judgment. 3rd. That, as the hymen exists with the greatest number of girls, who are not deflowered, its presence or its absence deserves the greatest attention. 4th. Notwithstanding the re-union of all these signs, yet it is impossible to affirm that a girl has been de-

flowered, unless we can ascertain that pregnancy or delivery has taken place; if otherwise, they only amount to presumptive evidence of the fact. 5th. These signs acquire greater weight and authority when they co-exist with contusions, wounds, and other marks of brutality about the organs of generation. 6th. The examination ought to be made with the greatest delicacy and decency, and, in order to be of any utility, should take place almost immediately after the fact, for often one or two days are sufficient to cause the disappearance of any traces which the introduction of a foreign body into the vagina may leave after its passage. 7th. Before delivering our opinion we ought to examine into the character of the woman, her manners, her age, conduct, mode of life, the education she has received, the characters of those with whom she associates, and the way in which she submitted to be examined, and the impression it made on her; these moral circumstances ought to be taken into consideration along with the physical appearances of the organs of generation. 8th. The medical man should never forget, that in lightly pronouncing his opinion he may bring disgrace on a girl whose conduct has been irreproachable, or expose a man to a criminal prosecution who is innocent of the crime laid to his charge.

Since the crime of rape is generally committed on the person of a virgin, there is usually considerable disproportion between the size of the body intromitted and the capacity of the recipient. Consequently much force must be used to effect this violent intromission, and the genital parts can no longer preserve their pristine virginal integrity. The hymen is generally torn and tattered; the fragments of this membrane are bloody, or ulcerated; the labia pudendi and nymphæ are red, swollen, painful, and sometimes bloody; the orifice of the vagina, the meatus urinarius, and other external parts of generation have a similar appearance. It is not unfrequent to see severe bruises on the thighs, arms, breasts, lips, cheeks, and other parts in consequence of resistance; sometimes there is a purulent discharge, occasioned by the violent friction of the parts, and which will even occur when there has been only an attempt to violate. This discharge is never *contagious*. These appearances are particularly evident when the crime has been repeated several times.

But instead of the offending member being disproportionately large, the reverse may happen, or the parts may be adjusted to each other, in which cases, notwithstanding the perpetration of the crime, none of the appearances pointed out might present themselves; in such a case only severe bruises might appear on different parts of the body, in consequence of the resistance offered by the young woman.

It is important to remember that a purulent discharge frequently takes place in catarrhal affections of the vesica and meatus urinarius and vagina, especially at the period of dentition, in certain erysipelatous diseases, as scarlatina, measles, and such like; also at the period of puberty, previous to menstruation, or on the approach of marriage from frequent excitement, and in like manner from several other causes.

Capuron relates a case of a child four years old, who was attacked with pulmonary catarrh, accompanied with fever; she discharged from the vulva an extremely acrid, whitish, puriform mucus; the labia and the mons Veneris were inflamed, swollen, and painful; in addition, there were some deep-seated ulcers, emitting a purulent matter. The parents became alarmed, and supposing the disease venereal believed the child had been violated. Mild emollient remedies quickly produced a cure, proving that the discharge and ulcerations of the genital parts arose from a catarrhal affection or influenza, which was at that time epidemic at Paris. Dr. Percival relates a similar case. Jane Hampson, aged four years, was admitted an out patient of the Manchester Infirmary, Feb. 11, 1791. The female organs were highly inflamed, sore, and painful, and she complained of pain in making water. The child had slept two or three nights in the same bed with a boy fourteen years' old, and had complained of being very much hurt by him during the night. Leeches and other external applications, together with appropriate internal remedies, were prescribed, but the debility increased, and on the 20th Feb. the child died. The coroner's inquest was taken, previous to which the body was inspected, and the thoracic and abdominal viscera found free from disease. From these circumstances, the surgeon attending this case was induced to give it as his opinion, that the child's death was caused by external violence, and a verdict of murder was accordingly returned against the boy with whom she had slept. Not many weeks elapsed, however, before several similar cases occurred, in which there was no reason to suspect that external violence had been offered, and some in which it was absolutely certain that no such injury could have taken place. A few of these patients died. The surgeon was now convinced that he was under a mistake in attributing the death of Jane Hampson to external violence, and informed the coroner of the reasons which induced this change of opinion. Accordingly when the boy was called to the bar at Lancaster, the judge informed the jury that the evidence was not sufficient to convict, and directed the boy to be acquitted. The disorder in these cases, says Dr. Percival, had been a typhus fever, accompanied with a mortification of the pudenda.—*Dr. Beck*, p. 55.

There is a complaint described in the Medico-Chirurgical Transactions, which was preceded by a species of eruptive fever, of about three days' duration. The labia then became enlarged and inflamed, accompanied with a sense of burning heat on voiding urine. The inflammation was of a dark tint, and soon

extended itself internally over the clitoris, nymphæ, and hymen; ulceration succeeded, and the external organs of generation were progressively destroyed. This disorder proved very fatal, and out of twelve cases seen by the author only two recovered.

Thus, gentlemen, you perceive how easily one might be induced by appearances into error, and how extremely cautious we ought to be in delivering an opinion in any case whatever which admits of the possibility of doubt. In the case related by Dr. Percival, had not the medical man subsequently seen other similar cases there can be little doubt but the boy would have been condemned and executed for a crime of which he was perfectly innocent.

This horrid offence seems frequently to have been committed on children of tender years from an opinion, common amongst low ignorant libertines, that the best cure for gonorrhæa or syphilis is intercourse with a virgin.

It is melancholy to reflect that it has often been committed by hypocrites, who have been entrusted with the education of their victims. In 1758, John Forbes, a chaplain and schoolmaster at Daikeith, was convicted of a variety of libidinous acts, also of several rapes, and of having carnal knowledge of a girl (one of his pupils) under twelve years of age, for which he was sentenced to be whipped and banished.

In 1777, the Rev. Benjamin Russen, a puritanical schoolmaster, was convicted and executed for a similar offence on a girl under ten years of age.

"Nature," observes Dr. Paris, "has this revenge against those who pretend exemptions from her frailties, that to sustain their hypocrisies, they fall into greater crimes than those which they profess to avoid; assuming to be more than man, they degrade themselves into beasts."

The Doctor then refers to the case of Thomas Weir and his sister, also to the Rev. John Church, who was convicted of an abominable attack. On the expiration of two years' imprisonment, to which he was sentenced, he resumed his Methodistic functions, and is now attended by large congregations, especially of old women!

In accusations of rape, we ought to bear in remembrance not only all such diagnostic characters as tend to prove the commission of the crime, but also such appearances as might be confounded with the others, and thus lead to a fallacious presumptive proof of guilt.

1st. There are those catarrhal affections of the genital and urinary organs which have been already noted, and which the medical man ought not to pronounce venereal, and thus declare whether a rape has or has not been committed, according as the individual accused may or may not be attacked with gonorrhœa or syphilis; for, over and above the diseases already mentioned, which might give rise to a catarrhal affection of those parts, such discharge might proceed from the improper introduction of any hard substance other than the *membrum virile;* whilst, at the same time, a rape may have been committed, and the criminal be allowed to escape, should we hastily judge the discharge to be venereal, and find, on examination, that the accused has not any venereal symptom.

2nd. Lacerations and ulcers of the hymen have often been mistaken for venereal chancres, and adduced as proofs of rape, especially when the accused has had the disease. These injuries may proceed from the voluntary introduction of any hard substance or body besides the *membrum virile*, and are easily distinguished from syphilis, since a few days' rest, accompanied with baths, lotions, and a cool regimen, will cause them to disappear. Consequently, the medical man ought to suspend his judgment, to allow of sufficient time for their cure, and should also remember, that the internal surface of the labia, that the nymphæ, the clitoris, and the orifice of the vagina, is the usual seat of chancres.

3rd. On some occasions we ought to compare the relative strength of the accused with that of the prosecutrix, and especially the size of the genital organs of the parties: thus a healthy young woman may easily keep off an old man, and also a weak or infirm young one. It is reported of Queen Elizabeth, that she commanded a woman, who accused a man of having committed a rape on her, to draw a sword out of a scabbard the queen held in her hand. The woman did so; but when ordered to put it in, found it no such easy matter to do so, as the queen, by the slightest motion, caused the sword to miss the mark. Orfila declares, as his fixed opinion, that it is impossible to violate some girls, notwithstanding their legs, arms, and heads were held by three or four people. We all remember the story of Cervantes, who, when his favourite Sancho Panza was governor of Barataria, makes him decide a case of rape on this principle of relative strength. He orders the man to give the woman a purse of money, with which she left the court. To use the inimitable language of Cervantes, she was scarce gone out, when Sancho said to the herdsman, who was in tears, and whose eyes and heart "were gone after his purse, 'Honest man, follow that woman, and take away the purse from her whether she will or no, and come back hither with it.' This was not said to the deaf or the stupid; for instantly he flew after her like lightning, and went about what he was bid. Presently after came in the man and the woman, clinging together, she with her petticoat tucked up, and the purse lapped up in it, and the man struggling to take it from her, but in vain, so tightly she defended it, crying out 'Justice, my lord governor; this varlet would take from me the purse your worship commanded to be given me.' 'And has he got it?' demanded the governor. 'Got it?' answered the woman, 'I would sooner let him

take away my life than my purse. A pretty baby I should be, indeed, to let such a pitiful, sneaking fellow as this get it from me: no, not even the power of a lion should get it out of my clutches: my soul and body shall sooner part.' On which Sancho ordered the purse to be restored, and the virtuous virago to depart, observing, that 'had she but shown half as much courage and resolution in defending her chastity, as she had in defending her purse, Hercules could not have forced her.'"

4th. There may be considerable laceration of the parts, notwithstanding defloration has taken place with consent, when there is much disproportion in the relative size of the organs of generation. When there has existed a tacit consent on the part of the female, there will not appear any marks or bruises on any part of the body; it may happen, that, at first, she may resist the attempt, and, in so doing, receive several bruises; yet, immediately afterwards, far from offering any resistance, yield herself willingly to the inclinations of her lover. This is far from being of rare occurrence; and it has more than once happened that, under these circumstances, a girl has sworn to the rape, and shown the bruises she had received as the proofs of her resistance.

5th. Accusations of this kind are sometimes preferred with a view to extort money, or from the desire of revenge for slighted love. For these ends women have been known to injure and bruise themselves as if a rape had been committed. There is a case on record where an old woman accused several individuals of having violated her grand-daughter, a child about ten years of age. On examination, the parts were found uninjured, the hymen perfect, and the vagina would not admit of the introduction of the little finger; but there was a red circle, the size of a crown-piece, about the pubis and the upper part of the vulva, which had been recently produced, and shortly afterwards disappeared.

In concluding this lecture, it is unnecessary to mention, that investigations of this nature ought to be conducted with much caution, and that the moral evidence of the case ought to be taken in conjunction with those physical facts and inferences which may appear upon examination; and in all cases ought we to suspend our judgment, until we have received the moral as well as physical conviction, that there is no longer any room left for doubt.

AN ESSAY ON THE TWO SPECIES OF JALAP MET WITH IN COMMERCE.

BY GABRIEL PELLETAN.

The principal works on materia medica inform us that jalap, a native of Mexico, and consequently unknown to the ancients, had long been used by the Mexicans, before the Spaniards became acquainted with its virtues. The first author who speaks of this root, and who, therefore, deserves to be especially noticed, is Gaspard Bauhin. According to him, it was introduced in commerce about the year 1609. The Marseillois, who obtained it from Xalapa, a city of Mexico, gave it the name of jalapa, or gelapo. As Bauhin described the jalap by the name of *Bryonia Mechsacana nigricans*, preferring it to the white Mechsacana, because it evacuated the humours better, we have reason to believe that he had not seen the whole plant, but that, from the resemblance of its root to that of the briony, he considered the two plants to be of the same species. Nevertheless, it is worthy of remark, that he classes the brionies immediately after the convolvuli.

The species to which the jalap really belonged continued doubtful until the middle of the last century. Ray and Plubenett, the first authors who examined jalap, in a botanical point of view, placed it among the convolvuli, —the former giving it the name of *convolvulus Americanus, jalapum dictus.* Some time afterwards, on the faith of the description given by Plumier and De Lignon, who said they had seen the plant when in America, Tournefort considered the jalap to be produced by a *mirabilis (belle de nuit) jalapa officinarum fructu rugoso.*

Returning now to the opinions of the earlier botanists, Miller and Sir Hans Sloane replaced the jalapa among the convolvuli. Geoffroi ascertained that Houston, when he returned from America, showed the jalapa plants to Bernard de Jussieu, who was then in London, and this celebrated botanist considered it to be a convolvulus, while Linnæus agreed in opinion with Tournefort, and even, from the size of the jalap root, thought that it belonged to the *mirabilis longiflora.* But Linnæus also, some time afterwards, placed it among the convolvuli, and gave the following as its specific characters:—

Convolvulus Jalapa, foliis difformibus cordatis, angulatis, oblongis, lanceolatisque, pedunculis unifloris (seminibus lanigeris).

Thus the plant jalapa, which by its infundibuliform corolla, its open limbus, its five stamens, its one style, resembled partially the mirabilis, was finally recognised to be a real *liseron*, or convolvulus, with flexile stalks, leaves alternate, flowers axillary, and capsules multilocular.

Was the real jalap known then? Might not various species of plants, as Murray says, when speaking of the discovery of Thiery de Ménonville, furnish roots similar in appearance and in properties? Thiery, in 1777, found, near Vera Cruz, a convolvulus, which he declared to be the real jalap, its root weighing about twenty-five pounds. He made a description of it on the spot, which he sent to M. A. L. de Jussieu, and afterwards to M. Desfontaines. This latter botanist, comparing this description with the *ipomæa macrorhiza* of Michaux, perceived so perfect an indentity, that he became fully convinced that the real jalap had long been cultivated in the *Jardin des Plantes.* This fact appeared to be so im-

portant, that Michaux, the younger, published in the *Annales du Musée d'Histoire Naturelle*, that his father, in 1788, in a voyage to Florida, Georgia, and Carolina, had found this species of convolvulus (the *ipomœa macrorhiza*), which he cultivated in the garden of Charlestown, whence the seeds had been sent by the son to the *Jardin des Plantes*, at Paris. On this occasion, M. Desfontaines inserted in the *Annales du Muséum*, vol. ii. p. 220, an essay on the jalapa, to which he added a drawing of the entire plant, and gave the following as its specific characters:—

Convolvulus Jalapa, caule volubili tuberculoso, foliis cordato-ovatis, subrugosis, subtusvellosis, integris aut lobatis, pedunculis uni vel multifloris, filamentis basi tomentosis, semine lanigero.

He also stated, by the medium of the synonymes he employed, that his *liseron jalapa*, the flowers of which are white, is the same as the *ipomœa macrorhiza* of Michaux, the *jalapa* of G. Bauhin, the *convolvulus jalapa* of Parkinson, Ray, Houston, Miller, Linnæus, Lamarck, Aiton, Wildenow, and Woodville. Thus M. Desfontaines, a conscientious and learned botanist, led away by the assurances of Houston, Linnæus, and Thiery de Ménonville, and especially guided by the purgative powers of the root of his jalap, did not pay sufficient attention to the size of the root, which may weigh as much as thirty kilogrammes, whilst we can scarcely ever, according to M. Guibourt, meet with a root of the jalapa in commerce weighing more than a pound, and most commonly it weighs much less. Nevertheless, all the writers on botany and materia medica adopt the opinion of M. Desfontaines.

It was only in the year 1827, that Dr. Redman Coxe, of the University of Philadelphia, on the one hand, and M. Ledanois, a French *pharmacien*, established at Orizaba, on the other, were finally enabled to cultivate the real officinal jalapa, the tubercles of which resembled those of commerce, or rather were completely identical with them. Whilst Dr. Redman, in 1830, was publishing a description of the true jalap, in the *American Journal of the Medical Sciences* for February, M. Ledanois sent to M. Chevalier a letter which was read at the Academie de Médecine the 8th of August, 1829, containing a short description of the leaves and roots of the real jalap, and of another species called the *jalap mâle;* he also sent to M. Humboldt, who forwarded them to M. Desfontaines, specimens of the real and false jalapas, but, unhappily, in so bad a condition, that it was impossible to ascertain whether these species of the convolvulus were already known or described.

Of the real Jalapa.

M. Ledanois enclosed the following remarks, with a specimen of this plant.

"Early in the year 1827, immediately after my arrival at Orizaba, a city of Mexico, I engaged in the search of the plant which supplies the jalap of commerce, according to the recommendation of the Baron Humboldt. The natives, fearing the loss of one of their sources of wealth, refused every offer made to engage them to bring the plant, and I was fearful that I should fail in my enterprise, when, urged on by poverty, an Indian, who was accustomed to sell me the dry roots, brought me a large quantity in an imperfect state of desiccation. On examining these carefully, I was lucky enough to find several which were yet capable of vegetating. I did not let the opportunity of procuring what I was so anxious for escape me: I planted them; and, at the end of a month, I had several plants, which supplied me with a great number of flowers and some seeds. The plant is slender, climbs on trees, or creeps when it has not any support; is capable of resisting the effects of cold, even at three or four degrees below the centigrade thermometer; it is destroyed by great heat, so that, in order to preserve it, it should be kept in the shade; the leaves are smooth, and of a beautiful green colour; the peduncles, generally unifloral, are very rarely bifloral; the capsule contains one grain only, very rarely two; the roots are tubercular."

Botanical Description of the True Jalapa of M. Ledanois, to which is given the name of Convolvulus Officinalis.

Root vivacious, tuberiferous; tubercles fleshy, irregularly spherical, brown externally, yellowish internally, and lactescent. The lactescence is owing to a solution of a resinous matter, which, in the dry root, forms about one-tenth of the whole weight, and which purges at a medium dose of nine grains.

The *plant* is completely glabrous, very arborescent, and capable of attaining a great height. *Stalk* cylindrical, slender, and weak, twisting, rubescent, as well as the petiolæ and peduncles. *Leaves* alternate, entire, *deeply cordated*, (with rounded lobes, generally divergent,) acuminated, and smooth, of a light green on the upper, darker on the under surface; eight centimetres long; the limbus is twice as long as the petiola. *Peduncles* axillary, solitary, rather longer than the petiolæ, unifloral, very rarely bifloral, with two opposite foliolæ, placed at their upper third. Calyx green, persistent, six or seven millimetres in length, with five unequal divisions, deep, oblong, and lanceolate; two external divisions shorter, two internal slightly membranous on their edges, the fifth partly external and partly internal. *Corolla, hypo-crateriform*, of a rose-red colour throughout, presenting, by the disposal of its fibres, the appearance of a tubular calyx, with five divisions, very lanceolate, and terminating on the edge of the limbus, of which they appear to be the origin. This disposition is common to all the liserons; it depends on that part of the corolla, which forms the bud, being composed of longitudinal fibres, parallel with each other, more

prominent, especially on the margin of the false divisions, whilst the part of the limbus which is rolled in the interior of the bud, is formed by thinner and more delicate fibres, which, although parallel with each other, arise obliquely from the species of margin which forms the division of the simulated calyx. The illusion is increased by the modification of colour which a longer exposure to the air gives to the external surface of the bud. The tube of the corolla, about five centimetres long, narrow, slightly dilated at its upper part, where it is four or five millimetres broad; orifice rather narrowed; the limbus semi-transparent, of a clearer rose colour, almost plane, slightly curved on its margin, sixty-six millimetres in diameter, with five lobes, slightly deepened and partly bilobed. The tube of the corolla of the liserons ought to be considered as terminating at the origin of the divisions of the simulated calyx. The *stamens* are projecting, unequal, the longest being, from the base of the corolla, seventy-two millimetres; anthers vertical, narrow, sagittal, four millimetres in length, supported by thread-like glabrous filaments. *Pistil* projecting, seventy-four millimetres in length, ovarium small, conical, bilocular, surrounded by a nectary at its base. *Style* thread-like; *stigma* small, capitated, with two horizontal hemispherical lobes marked on their upper and convex surface with small tubercles. *Capsule* bilocular, with monospermous cavities; very often, from abortion, the capsule is monolocular monospermous. The *seed* is irregularly spherical, of a blackish brown colour; when seen with the aid of a glass, presenting a slightly wrinkled appearance, but not hairy, having at its base the cicatrix of the podosperm.

The whole surface of the plant being glabrous, its leaves cordated, the shape of the corolla hypo-crateriform, its rose colour, the great prominence of the stamens and pistil, the surface of the seed being without hairs and round, are so many determinate characters, marking a real difference between the liseron jalap of M. Ledanois and that of M. Desfontaines, (the *Ipomœa macrorhiza* of Michaux), the stems of which are tubercular, leaves cordated, oval, villous, the corolla campaniform, white or slightly yellow, the stamens not projecting beyond the tube of the corolla, the seeds bristling with hairs, almost triangular, and consequently enclosed in a multilocular capsule.

The differences between the description of the liseron jalap of M. Ledanois and that of M. Nuttall, inserted in the Essay of Mr. Smith, may be shown by the indications which this last-named botanist gives of his plant.

The leaves have prominent veins, with a petiola as long as the limbus, the lower ones having sometimes two transverse lobes at their base. The peduncles are generally bifloral, very rarely trifloral; this latter has never been seen by M. Ledanois; corolla infused infundiform, stamens rather projecting, stigma simple. Finally, the drawing represents the leaves slightly acuminated, not apiculated, with stamens equal; it indicates also the tendrils as opposed to the leaves; this latter circumstance must be owing to the draughtsman not being a botanist.

Nevertheless, the differences we have pointed out are not so sufficiently marked as to indicate that the liseron jalap of Dr. Redman is of a different species to that of M. Ledanois. At any rate, it is very different, as Dr. Smith has remarked, from the Convolvulus jalapa of Desfontaines (the *Ipomœa macrorhiza* of Michaux)

Of the Jalap Male of M. Ledanois.

M. Ledanois had not a complete specimen of this jalap in his possession; he could only send the leaves, isolated flowers, and a single seed. He, therefore, added the following account:—

"I experienced the same difficulty in procuring the convolvulus, named by the natives *Jalap mâle*, and which I propose to call *Ipomœa Orizabensis*, because, like the real jalap, it is very abundant in the neighbourhood of the city of Orizaba.

"The root of this plant is thick, cylindrical, fusiform, and very fibrous, about twenty inches long, yellow externally, of a dirty white internally. In common it is mixed with the roots of the true jalap; it contains about eight per cent. of resin; is a mild purgative in the dose of forty-eight or sixty grains. The plant, which is hairy, is stronger than that of the true jalap; it has no occasion for support, and resembles the stem of the Solanum dulcamara very much by its colour and thickness; its leaves are of a pale green; the peduncles have one, rarely two, flowers; the first contains only one seed, rather larger than that of the common jalap. Uninjured by great heat, this plant grows at the foot of the Cordilleras, where the thermometer never descends below zero."

There cannot be a doubt, from the remarks of M. Guibonat, that M. Ledanois did not meet with the plant which furnishes the jalap of commerce with the fusiform root, a root which Dr. Smith, towards the end of his Essay, describes under the name of *Jalap leger*, without knowing the plant which produces it.

Description of the specimen sent by M. Ledanois, under the name of Ipomœa Orizabensis, and which we name Convolvulus Orizabensis.

Root vivacious, fusiform, cylindrical, fleshy, lactescent, capable of acquiring a great size, yellow externally, and of a dirty white internally. The plant is rather hairy over its whole surface. Stem cylindrical, green, rather strong, but flexile; leaves slightly acuminated, apiculated, deeply cordated, the length varying from twelve to twenty-five centimetres, alternate, entire, almost round, oval, with round, proximate lobes; hairs rather stiff, flat,

more evident on the under surface, and especially over the veins, more scarce on the larger leaves; the principal sides are more prominent; the petiolæ also are hairy, and of the same length with the limbus; peduncles slender, axillary, solitary, six or seven centimetres long, very rarely twisted; pedicellæ rather more hairy, and about half the length of the peduncles, with two foliolæ at their origin, and two others, forming a shell, as it were, at their lower third. Calyx persistent, eleven or twelve millimetres long, having five deep, unequal, oblong, and slightly lanceolate divisions; the two external, the shortest, are covered with rather long hairs at their base; the two internal, the longest, have membranous margins, are glabrous, except at their base, where some hairs are to be found; the fifth, which is partly internal and partly external, has also some hairs. *Corolla* campaniform, the external part of which appears to have been covered with hairs, removed by friction; this corolla presents also the appearance of a tubular calyx, with five long and lanceolate divisions; the tube, of a lighter colour than the rest of the corolla, is almost white at its lower parts, and is from twenty-eight to thirty millimetres in length, with a diameter of from twelve to fourteen; the limbus semi-transparent, of a purple-red, open, turned back on its margin, fifty or sixty millimetres in diameter, and divided into five well-marked lobes, slightly bilobed. Stamens enclosed, unequal, the longest being twenty-five metres in length; anthers narrow, vertical, sagittated, four metres in length, supported by a thread-like fillet at its upper part, dilated and hairy at its under part. Pistil enclosed, twenty-seven metres long; style thread like; stigma small, capitated, with two hemispherical, horizontal lobes, marked with small tubercles at their upper and convex part. Capsule bilocular, with monospermous cavities; frequently, by abortion, the capsule is monolocular, monospermous. Seeds almost spherical; seen with the aid of a glass, they appear to be very slightly wrinkled, and covered here and there with short hairs; they are of a brownish-black colour, marked at their base with a circular hilus.

Research was made in botanical works, in the Herbaria of M. Dilessert, and in those of the Museum of Natural History at Paris, and only two plants, which could be mistaken for the Ipomœa Orizabensis of M. Ledanois, could be discovered. One is the *Ipomœa purpurea* of Lamarck, which is cultivated in the Jardin des Plantes. The appearance of this annual plant, the peculiar shape of the leaves, the length of the petiola, their villous condition, &c.; the shape and size of the corolla, the colour of the limbus, its enclosed stamens, may cause it to be mistaken in the first instance, but the longer and narrower divisions of the calyx, the trilobed stigma, the triangular seeds, the multifloral and sometimes arborescent peduncles, will serve as a distinction between the *Ipomœa purpurea* of Lamark, and the *Ipomœa Orizabensis* of Ledanois; neither can it be confounded with the variety of the *I. purpurea*, inasmuch as it merely differs by being more glabrous, with a calyx more tubulated, and almost hairy.

The bilobed stigma, which constitutes the essential distinctive mark between the *I. purpurea* and the *I. Orizabensis*, is to be met with in the *Convolvulus superbus* of M. Kunth, or the *C. sanguineus* of Willdenow; this latter plant, which is vivacious, also grows at the Cordilleras of Orizaba; its stamens are enclosed, its colour purple, its stigma bilobed, leaves round, oval and cordated, acuminated; but the extreme villosity of the plant, the shortness of the petiolæ, which are only four centimetres in length, the peduncles being at the same time twice as long as the leaves, that is, from eleven to fourteen centimetres in length, without reckoning the pedicellæ, which are from one to two centimetres, form striking marks of difference with the Ipomœa in regard to their relative size; the penduncles are often tri-quadrifloral, the size of the calyx, two centimetres in length, and the width of the corolla, which is at least a third longer than that of the Orizabensis, form, with those differences previously mentioned, a distinctive appearance as regards the *Convolvulus superbus*, by which we may be enabled to distinguish the *I. Orizabensis* of M. Ledanois.

M. Ledanois has also brought from Mexico several flowers of a convolvulus furnished only with a calyx and their pedicellæ; they are isolated, without leaves or stalks. The pedicella is glabrous, and equally long, but thicker than that of the Orizabensis, the calyx very small, contrasting with a corolla of nearly the same shape with that of the Orizabensis, but much larger, with less marked lobes. These appear to constitute a sufficient distinction between them and the Orizabensis. Nevertheless, it is worthy of remark that the stamens are also enclosed and hairy at their base, and that the stigmas, the shape of which could not be accurately ascertained on account of their damaged condition, appear to be bilobed. According to M. Ledanois, who is uncertain as to the origin of these flowers, they might belong to a variety of the *Convolvulus Orizabensis*, having vegetated in a stony and poor land, but this is opposed to the strength of the peduncle and the size of the corolla. These flowers, belonging to a plant of which we have hitherto no succinct history, have been here described because they are natives of the environs of Orizaba, and brought by M. Ledanois; we shall name, in the meanwhile, the liseron to which they belong, the *Convolvulus microcalyx*.

With regard to the two plants which are better known to us, the *C. Jalapa* and the *C. Orizabensis*, ought they to be classed with the Convolvuli or Ipomœæ?

If we consult authors on the subject, we

find that nothing is less certain than the distinction of botanical characters which mark the separation of the two genera. Thus Tournefort says they differ in the shape of the corolla: —*Quamoclit à convolvulo differt floris formâ.* He therefore places the Convolvulus in the first class, and the Quamoclit in the second. According to Linnæus, the corolla is merely secondary, the bifid stigma of the convolvulus distinguishing it from the capitated, globular stigma of the Ipomœa. M. A. L. de Jussieu also considers the form of the stigma as the distinctive sign. The only essential difference pointed out by MM. Lamarck and De Candolle between the two genera, is the capitated and globular stigma of the Ipomœa, by them called *sub-trilobed*, a vague definition, by which all the liserons having capitated stigmas with one, two, or three lobes may be arranged in the same genus, such as those of the *Ip. coccinea, Quamoclit, luteola, purpurea*, &c. M. Desfontaines appears to adopt a similar distinctive mark; he classes the *C. Jalapa* among the liserons. M. Kunth, in his Synopsis of Equinoctial Plants, considers that the projection of the stamens beyond the tube marks the Ipomœa, while the stamens of the Convolvulus are shorter than the corolla.

M. Choisy, a distinguished botanist residing at Geneva, having studied the Convolvuli carefully, the uncertainty of the distinctive characters of which is much increased in consequence of the numerous species recently discovered, has felt the necessity of attempting the formation of new groups, in order to facilitate the researches of botanists, and the classification of the species. But, unfortunately, nothing has hitherto been published on the subject; and it may be considered a fault in us to publish the classification according to which M. Choisy arranged them, and of which we acquired our knowledge while examining the Convolvulaceæ in the General Herbarium at the Museum of Natural History at Paris. We shall, however, give a slight sketch, which, doubtless, the continued labours of M. Choisy will modify considerably.

Convolvuli.

Sectio prima.—Corollis longissimis, limbo albo (Ipomœa, Kunth). Exemplum: Convolvulus grandiflorus.—Jacq.

Sectio secunda.—Corollis brevioribus rubris. Ex.: Ipomœa quamoclit.—Lin.

Dufourea, Kunth. Ex.: D. Glabra.—K.

Falkia, Lin. Ex.: Conv. Falkia.—Lin.

Convolvulus.—Lin.

Sectio prima.—Antheræ tortiles (Strophandra).

Div. 1.—Calycis foliola exteriora majora. Ex.: C. triqueter.—Vahl.

Div. 2.—Calycis foliola æqualia. Ex.: C. peltatus.—Lin.

Sectio secunda.—Floribus involucratis.

Div. 1.—Floribus non capitatis (Calystegia). Ex.: C. sepium.—Lin.

Div. 2.—Floribus capitatis. Ex.: Ipomœa Pes tigridis.—Lin.

Sectio tertia.—Flores nudi, calyx longus, accrescens, corolla lutea aut alba (Macrocalyx).

Div. 1.—Folia lobata. Ex.: C. vitifolius. —Lin.

Div. 2.—Folia integra. Ex.: C. tiliæfolius.—Lin.

Sectio quarta.—Flores nudi, calyx non accrescens, corolla sæpius rosea (Convolvulaceæ).

Subsectio I.—Non volubiles.

Div. 1.—Repentes. Ex.: C. Pes capræ.—Lin.

Div. 2.—Erecti seu diffusi. Ex.: C. lanuginosus.—Lamarck.

Subsectio II.—Volubiles.

Div. 1.—Stigmata linaria profundè fissa. Ex.: C. Siculus.—Lin. C. arvensis.—Lin.

Div. 2.—Stigmata capitata brevia.

1st. Folia margine integra. Ex.: C. nervosus.—Lamarck. Ipomœa macrorhiza.—Michaux. (*C. Jalapa.*—Desfont.) Among the last of this group will be found the Ipomœa purpurea of Lamarck.

2nd. Folia margine dentatâ, lobata aut laciniata. Ex.: C. nil.—Pers. C. hederacea.—Lin. C. batatas.—Lin.

Sectio quinta.—Flores nudi, calycis foliolâ exteriora infra producta (Aniseia). Ex.: C. medius.—Lin.

Convolvuli minus noti. C. paniculatus.—Lin. Ipomœa carnea.—Jac.

The following genera conclude the Convolvuli of the general herbarium:—Dichondra polymeria, evolvulus, cressa, porana, endrachium, cuscuta, hydrotis.

In order to be able to appreciate properly this classification, we must know the motives which guided M. Choisy—we must have studied with him all the rich botanical collections of Europe. Nevertheless, although we must acknowledge that the classification of M. Choisy is formed of natural groups, and ought to be preserved, we may be allowed to remark, that if the *C. Orizabensis* may be naturally placed in the second sub-section of the fourth section with the *C. purpureus* (the *I. purp.* of Lamarck), and with the *C. Jalapa* of Desfontaines (the *I. macrorhiza* of Michaux), the *C. officinalis* of M. Ledanois can only be placed in the second section of the Ipomœæ, and not in the genus Convolvuli. This would place at a great distance from each other two plants which resemble each other much more than the officinal jalap of M. Ledanois resembles the quamoclit, coccinea, &c.

By guiding ourselves by the appearance, and that assemblage of characters which give not only an air *de famille*, but certain generic resemblances to the *C. officinalis* of Messrs. Nuttall, Smith, and Ledanois, to the *C. Jalapa* of Desfontaines, or *I. macrorhiza* of Michaux (*Falso-jalapa*), to the *C. Orizabensis*, the *I. Orizabensis* of M. Ledanois, to the *C. superbus* of Kunth, or the *C. sanguineus* of Willdenow, to the *C. purpureus* of Linnæus, the *I. purp.*

of Lamarck, and the *C. scammonea* of Linn., may we not, as we propose to do, place all these species in the class Convolvuli, while attending to the two principal divisions of M. Kunth? Thus, in the first section of the genus Convolvuli — *staminibus exsertis inæqualibus.*

Div. 1.—Stigmati capitato bilobato—will be placed the *C. officinalis:* the essential characters are—

Herba undique glabra; caule volubili, rubescenti; foliis ovatis, lanceolatis, cordatis, longè acuminatis, apiculatis: pedunculis folio brevioribus, uni, raro bifloris; calicibus brevibus, profundè 5-fidis; corollis hypocrateriformibus, tubo longo; limbo subplano obscurè 10-lobato; seminibus solitariis sub-sphæricis.

In the second section of the genus Convolvuli—*staminibus inclusis.*

Div. 1.—Stigmati capitato bilobato—will be placed, first, the *C. superbus* of M. Kunth, secondly, the *C. Orizabensis*—the *I. Orizabensis* of M. Ledanois; the essential characters of which are—

Herba undique tenuissimè pubescens; caule volubili; foliis subrotundis, breve acuminatis, apiculatis, profundè cordatis: pedunculis folio brevioribus; uni, raro bifloris; calicibus brevibus, hispidis; corollis infundibuliformibus; limbo obscurè 10-lobato; staminibus inclusis, hispidis; seminibus (abortu) solitariis, subsphæricis.

Thirdly, the *C. scammonea* of Linnæus; fourthly, the *C. microcalyx.*

Finally, in the subsection, stigmati capitato trilobato, will be placed the *C. purp.* of Lin. or the *I. purp.* of Lamarck, &c.

The characters furnished by the division of the leaves, the form of the calyx, the colour, size, and shape of the corolla, &c. &c., may serve for the subdivision of the groups.

In pointing out the preceding mode of classification we had not the slightest intention to attempt excelling M. Choisy, which we believe impossible for us to do, but merely to locate the two species which we have more especially studied.

(Signed) Gabriel Pelletan.

Reviews.

A Practical Treatise on the Diseases of the Eye. By William Mackenzie, M.D., &c. Second Edition. Longman.

There are various branches of medical science comparatively of modern origin, and ophthalmic surgery ranks among the number. But a few years ago all the diseases of the eye were arranged under two or three comprehensive terms sufficient to cloak the ignorance of the period, and there may be a few still living who, not having kept pace with the rapid progress of the age in knowledge, are inclined to contemn distinctions which they esteem needless, and deem the good old round term ophthalmia quite satisfactory, and sufficient to designate every morbid change to which the eye is liable, and an eyewash of sugar of lead the abracadabra for all the ills human optics are heir to! To such what shall we say to recommend a volume exclusively devoted to ophthalmic pathology and surgery, consisting of nearly one thousand pages? And yet we do so with the greatest sincerity and pleasure.

Of all the treatises on the diseases of the eye, and the counters of the booksellers groan under their weight and number, there is none comparable with Dr. Mackenzie's, whether we regard it as the most complete work on the subject, embracing, as it does, all the best opinions and modes of practice of the most celebrated oculists of Germany, France, and Italy, or as a work containing the opinions and practice of one of the best informed oculists of the present day. It is a most elaborate undertaking, and the author has acquitted himself like one perfectly master of his subject; he is clear and methodical in the general arrangement, and evinces much soundness of judgment, and extensive experience in the details.

The work opens with an introduction, giving the anatomy of the eye, which the author further illustrates by a map of the organ. Next comes an ample account of the diseases to which the orbit is subject, and those parts exterior to the eye proper, acting subsidiary to vision.

Having said so much in commendation of the work, it may be permitted us to notice detached parts in which we differ in our views from the author. An instance for this occurs at page 189, where he treats of hemicrania. Hemicrania is one of those old terms of very vague and indefinite signification, meaning at times any thing, and, at others, nothing; but it will be seen by Dr. Mackenzie's own description of the disease, that he is, in reality, treating of rheumatism affecting the aponeurosis of the occipito-frontalis, and which often involves the tunica albuginea of the eye, exciting rheumatic inflammation on its surface. The Doctor's words are, "Nearly allied to neuralgia is a painful affection which sometimes extends to the forehead and face, and *especially to the orbit and eyeball,* assumes more or less of an intermittent form, and receives, from the circumstance of its being generally confined to one side of the head, the name of *hemicrania.* An inflammation of the eye, *chiefly sclerotic,* easily distinguished from any of the ordinary forms of the ophthalmia, sometimes attends this disease."

We likewise think the Doctor is unfortunate in too indiscriminately adopting and applying the name ophthalmia to diseases essentially differing in their character from each other. At one time he employs the word *conjunctivitis* (and very properly) to designate the inflammation of the conjunctiva; at another, he treats of the inflammation of the same membrane, under the old and indefinite generic

term *ophthalmia*, as ophthalmia neonatorum, meaning conjunctivitis neonatorum; gonorrhœal ophthalmia, meaning gonorrhœal conjunctivitis; and more improper still, he speaks of rheumatic ophthalmia when he means to designate the rheumatic inflammation of the tunica albuginea and sclerotica.

Dr. Mackenzie attributes, very correctly, we think, the conjunctivitis of new-born infants to the matter of leucorrhœa, and he might have added, to that of gleet; but we question much whether the most careful washing of the eye immediately after birth would suffice to prevent its supervention. A very minute portion of virus seems to be sufficient to institute this specific inflammation, and which the greatest care does not appear capable of preventing.

Neither can we agree with our author in his definition of rheumatic ophthalmia. "Were it asked," he says, "what is meant by rheumatic ophthalmia, I should reply, that I mean simply inflammation of the fibrous membrane of the eye (the sclerotica), and of the surrounding parts of similar structure, excited by exposure to cold." Now it appears to us that this definition is both defective and inaccurate. Every inflammation of a fibrous structure is not necessarily rheumatic in its nature; and we apprehend that though the most obvious symptoms of simple sclerotitis and of rheumatic sclerotitis closely resemble each other, yet there are symptoms attendant on each competent to distinguish them. For example, those only who have had rheumatism in some other form appear to be liable to the rheumatic variety of sclerotitis; the attendant pain, also, is most severe at night; and, thirdly, it may be pointed out, that keeping the head warm does good, and affords ease in the one case, whereas it aggravates the symptoms of the other.

But leaving differences, to return to the more pleasing matter of accordances, we may point out, before concluding this review, some judicious remarks with respect to the treatment of onyx. Dr. Mackenzie dissuades us from opening the interlamellar abscess with a knife. "In every case in which I have done this, partial or total staphyloma has been the result." We here take leave of this valuable work, persuaded that it will not only supersede all preceding compilations, sold under the title of treatises, but, by filling up the gap so perfectly, prevent others, for a time, at least, from treading in the same pathway. Much may yet be expected in elucidation of particular parts of ophthalmic pathology and surgery, and so much of the subject therefore lies open still for honourable competition to distinguish itself.

The Medical Almanack, or Calendar of Medical Information for the Year 1835. Company of Stationers.

On cursorily looking over the "Medical Almanack," we observed its pages filled with a considerable quantity of matter, and on an infinite variety of subjects, each respectively interesting to the medical man. It is truly "multum in parvo," but, unfortunately, a great part of this "multum" is incorrect. We have looked chiefly at the subjects more immediately relating to the profession, but even among the collateral topics many errors prevail. For example, Sir William Blizard is mentioned as one of the Vice-Presidents of the College of Surgeons, and it is well known that he resigned the office, and that it is now occupied by Sir A. Cooper. The Royal Medical and Chirurgical Society is not in "Lincoln's Inn Fields," but in Berners-street. "W. B. Lynn, Esq." is not assistant-surgeon to the Westminster Hospital, but Mr. F. Hale Thompson. Innumerable are such errors—which ought not to have existed, undoubtedly. Mr. J. Upton is *Master* of the Apothecaries' Company, and not "John Nursey, Esq." With respect to the address of individuals the errors are countless. We may notice two: thus, Mr. Lane, the medical agent, is described as residing in Earl-street, Blackfriars, when it is well known his residence is in George-street, Adelphi, and Mr. Gill at the former place; and not at the latter, as stated. To those gentlemen such an error might be a serious injury. The "Medical Almanack" would contain much useful information to all classes of the profession, *if it were correct.* In another year we trust the editors will be more careful. The present edition might have been brought out very well for 1834;—its announcements would have been more accurate.

FOREIGN MEDICAL LITERATURE.

A Memoir on Spasm of the Urethra and Neck of the Bladder.

Read at the Academy of Sciences November 23*rd*, 1834.

BY DR. CIVIALE.

In order to understand the production of spasmodic diseases of the urinary organs, particularly when the spasm attacks the neck of the bladder, it is indispensable to comprehend the normal urinal excretions; the opinions generally admitted on this point do not appear to correspond with facts.

When the bladder is in a state of vacuity, its walls, like those of all other hollow organs, are applied one against the other, their separation requiring at all times a certain degree of effort. The urine is thrown into the bladder by a certain degree of power, and does not fall into it without force, as is generally stated, and its accumulation is owing to its being retained, on the one part, by the vesical orifice of the urethra, and, on the other, by its being constantly

driven into it, from the considerable contractility which the ureters and kidneys possess. Proofs of these properties may almost daily be observed in consequence, on the one part, from retention of urine, from paralysis or spasm of the neck of the bladder, and, on the other part, from all cases of aggravated ampliation of the bladder. Rupture of the walls of this viscus, in cases of prolonged strangury, can only be explained by the expulsive power of the secretory urinal organs overbalancing the resistance of the vesical walls.

In the healthy state, the walls of the bladder contract, in order to surmount the resistance of the neck of this organ, as soon as they are separated by urine, as far as their muscular fibres will allow it. The bladder resembles then the uterus when in a state of gestation; that is to say, between the action of its body and neck there exists a perfect agreement, without which its function could not proceed in a regular manner.

The disposition of the muscular fibres in the body of the bladder, the principal of which are inserted in the neck of this organ, the point of support, which is, moreover, increased by the accumulated liquid, in a sufficient quantity in the vesical folds to procure a necessary extension for their contractile force, are further reasons which confirm the theory that I have just spoken of. The resistance, then, of the neck of the bladder, is overcome by the antagonising power of the muscular fibres of the body of this organ.

As to the organisation of the vesical neck, much less is known than as to its uses. Without admitting the existence of a muscular sphincter, contested by anatomists, whose scalpels hitherto have not discovered in this part fibres so distinct as those surrounding the anus, I regard it as surrounded by a circle of highly contractile fibres, destined to retain the urine, and to resist the expulsive action of the body of the bladder, as long as the accumulation of liquid does not suffice to distend this organ. What has been said by some modern physiologists on the other uses of the sphincter of this organ, such as those of preventing the catheter from penetrating into its cavity, appear to me unworthy of new researches.

It is from the action of the two antagonising powers, by means of which the excretion of urine ordinarily takes place without effort, and as it were, in an instinctive manner, almost without the participation of the will. But when the harmony that exists between these two powers is interrupted, we observe some inconvenience in the function, the reason of which may easily be accounted for.

The two powers then of which I am speaking, have each some assistance submitted through the medium of the will, and the concurrence of which, though very useful in some cases, may in others become the source of inveterate diseases. The muscles of the abdominal parietes are great auxiliaries to the expulsive power of the body of the bladder, and the muscles of the perinæum are those of the neck of this organ. Dangerous results may arise from the abuse or ill-directed use of these auxiliary powers with the excretory apparatus. It is thus, by frequent repeated efforts to evacuate the bladder without necessity, that arises an increase of elasticity and capacity of this organ. These effects are also produced from the presence of a calculus.

The contraction of the muscles of the perinæum, by aiding those of the sphincter of the bladder, resists the first desire of discharging the urine, the action alone of the sphincter being sufficient to form an equilibrium with the action of the fibres of the body of the bladder; but this faculty, needful in certain cases, becomes frequently a cause of disease. It is, in fact, from this action that arise most cases of paralysis and indolence of the bladder, and also spasm of the neck of this viscus. The bladder, over-distended with urine, which unceasingly is propelled into it by the kidneys, loses its faculty of contraction; it is then much less likely to disembarrass itself from the liquid that it contains, than the resistance of the neck, to pass in a morbid state by preventing it.

It is the same when a sudden and acute irritation invades a certain extent of the urethra; the walls of this canal become, as it were, contracted, and momentarily lose their active powers. This temporary contraction may cause a resistance to the expulsive powers of the bladder, and occasion retention of urine.

Distension of the walls of the ureters, abuse of coitus, the action of certain medicaments, such as cantharides, the use of beer, the emission of acrid urine, every direct or indirect irritation of the ureter, strong and prolonged contractions of the muscles of the perinæum, &c., may determine this spasmodic state of the urinary canal. Sir B. Brodie regards disease of the kidneys, of the rectum, hæmorrhoids, stone, and gravel, as equally capable of producing it. Refrigerants, violent emotions of the mind, may produce the same result, many examples of which I have myself witnessed.

These different causes sometimes produce a simple uneasiness in the discharge of the urine, which of itself will cease; at others such a complete retention as to require vigorous and prompt assistance.

The ordinary seat of the disease is below the pudic arch in the urethra, where the greatest influence is received in the act of generation, and which bears also the action of the muscles of the perinæum, &c. Nevertheless, it may also manifest itself in other parts of the canal, especially the spongy portion, a remarkable case of which I have recently published.

The diagnosis of these spasmodic contractions is simple. The inconvenience they produce in the emission of urine is sudden and temporary; there is no pain unless it results from impossibility of passing the urine. This

character is sufficient to distinguish them from all other affections; there is also absence of discharge. Catheterism, or even the introduction of a simple bougie, is always the best means of recognising the true cause of sudden retention. The greatest care must be taken to introduce these instruments as gently as possible, and by acting in this way no more difficulty will be experienced in arriving at the bladder, than if there existed no spasm.

When there are no complications of the disease, and the symptoms are but slight, the cure is generally speedy. But the situation of the spasm, and the cause which produces it, the morbid states which accompany it may require different modifications in the curative means employed.

In the first case, baths, leeches, and emollient applications generally suffice to combat the retention of urine. If already the symptoms, on the contrary, have acquired a certain severity, it is proper to check them at once by the introduction of a catheter or bougie. Finally, the medical treatment must vary according to the causes which have determined the spasmodic state.

One of the most important causes to mention of retention of urine in females, is the delay of the head of the fœtus in the lower part of the pelvis, and the pressure that it exerts upon the urethra during the period of parturition; from this may arise the most serious consequences. The accumulation of urine causes, then, in females at this period, most formidable nervous symptoms, which we frequently attribute to other causes, but after the evacuation of the liquid they will entirely disappear. In these spasmodic cases of the urethra after accouchement, the neck of the bladder and the middle part of the canal are more particularly the seat of the contraction. Urethra or vesico-vaginal fistules arise frequently from compression of the urethra and the lower fundus of the bladder against the pubis. The retention of urine which is the consequence, increases powerfully the secondary effects of this compression, which is inflammation and gangrene of the affected part.

If the introduction of a bougie into the urethra, if catheterism, by the simple friction of the instrument, suffice, without there being dilatation of the walls of the canal, to cause a sudden retention of urine in subjects of an irritable constitution, we ought not to be surprised that, in certain cases, the same effects are produced by the use of lithotrity. In a memoir that I have recently read before the Academy, I fully signalised this subject, therefore shall not enter into a more lengthy detail at the present time*. This symptom thus produced is not, in general, of much consequence, but it is always proper, before having recourse to the operation, to observe if the patient can discharge his urine freely. If there should be any difficulty, it is necessary to evacuate the bladder, and it is worthy of remark, when this precaution is taken, the difficulties do not re-appear.

There is a particularity which the sagacity of physio'og.sts have exercised, without which explanations that they have successively presented, may be very satisfactory. In many persons coitus renders the emission of urine much more easy for a few instants; it has been observed, even, that patients attacked with organic contraction of the urethra, after this act, have been enabled to discharge their water in a full stream. But frequently, also, will coitus, too often repeated, give rise to retention of urine.

This latter symptom corresponds to the spasmodic contraction of that part of the urethra situated below the pubis, particularly in persons who have had frequent attacks of blenorrhagia, and who have incipient organic contraction of the urethra. It is important to distinguish these two particular states, and it is in not keeping an account of the spasmodic phenomena, of which the curvature of the urethra from these contractions is the seat, that we have fallen into serious errors as regards the effects of some therapeutical agents.

All that I have stated in relation with the symptoms produced by spasm of the urethra, is either that it may be situated in the curvature of the canal, or that it may attack the situation where the cause has acted. The neck of the bladder is only affected in these cases in a secondary manner.

But there exists a particular kind of spasm, which results from a loss of equilibrium between the action of the muscular fibres of the body of the bladder, and the resistance which opposes to them the circular fibres constituting the neck of this organ. This kind of spasmodic state is much more frequent than is generally believed. Thus, as I have already remarked, in my preliminary considerations on the physiological mechanism of the excretion of urine, the action of the bladder in this important act is entirely organic, and, consequently, independent of the will; but it may be submitted to this latter power by the auxiliaries which nature has bestowed, either from the expulsive force of the bladder, or from a contrary force. The action of the abdominal muscles may produce expulsion of urine, before the bladder may be sufficiently distended, and the contraction of the perineal muscles increase the resistance of the neck of the bladder, and thus prevent the discharge of urine, so that there would be much powerful contraction of this viscus. But from this kind of combat between two antagonising powers, there ordinarily results such violent spasmodic contraction of the neck of the bladder, as to cause complete retention of urine. These cases are not rare; we daily observe patients who have resisted the first desire of passing their water, find afterwards an impossibility of doing it,

* An analysis of this Memoir we will give in our next; the whole of it is interesting and practically useful.—Eds.

though the desire becomes more and more urgent, and the dreadful agonising symptoms from retention of urine follow.

These cases present numerous varieties, but when retention is complete it is necessary, at all times, to have speedy recourse to catheterism, which is attended with neither difficulty nor danger. The accessary means, which it is proper at the same time to employ, must be determined by the general state of the subject, the intensity and complications of the local disease.

Another variety of spasm at the neck of the bladder may arise from the symptoms occasioned by the employment of cantharides; they differ only in cause, and therefore do not require other means for cure.

The opinions that I have advanced in this paper are supported by facts observed at the hospital of Necker, and many others that have occurred in my private practice. I will illustrate a few of them :—

Case I.—*Spasm of the Urethra in consequence of Excess in Coitus.*—Captain B., 36 years of age, of robust constitution, had frequently been attacked with blennorrhagia. His general health was excellent; he neither rested himself from the fatigues of war nor from the excess of coitus; but after coition latterly he was unable to evacuate his urine. All general means were useless, his efforts were unavailing. A catheter was introduced, three pints of urine were discharged, and the functions of the bladder became immediately re-established. A few months afterwards the same symptoms again appeared, and I had no trouble in checking their development. After having evacuated the bladder I was convinced that the urethra, below the symphisis pubis, was much more irritable than in a normal state. The introduction of a few elastic bougies destroyed this excessive irritability. After this the patient saw the necessity of a more moderate use of coitus, and since then he has found no functional derangement of his urinary organs.

Case II.—*Spasm of the Urethra produced by Cauterisation.*—An Englishman, who for some time had resided in France, had, for a length of time, been troubled with contraction of the urethra; nevertheless he could discharge his water without the aid of a catheter, and had never suffered from retention of urine. Fatigued by this strangury, he at length determined to follow a proper treatment, to establish a natural diameter of the urethra. He had recourse to caustic, which was then a favourite remedy amongst us. The applications were extremely proper, but every evening, after he had applied it, he suffered from retention of urine; the urethra, however, would admit of an easy introduction of a small bougie. The surgeon who attended him left Paris, and I was consulted. I had recourse to the same means, and it was attended with the production of retention of urine. Catheterism I had recourse to with success; afterwards applied elastic bougies, each of which I left in the urethra for a quarter of an hour. The treatment was long, but the result was successful.

Case III.—*Spasm of the Urethra produced by Lithotrity.*—M. Lefebvre, of Paris, a very old man, had suffered for a long time from stone in the bladder. The pains were not, however, of that special character which in general indicate the precise nature of the affection. In the end the patient submitted to the sound, and a stone was speedily recognised. After five short sittings the stone was perfectly destroyed, and the patient so far relieved.

The first application of the instrument was followed with retention of urine, which the patient for many hours neglected; his general health became deranged, and the bladder for many days did not recover the faculty of discharging its contents. The catheter was employed many times in the day. At the second sitting of the operation, the patient, in the first place, found a difficulty in discharging his water, and the sound was introduced, without being attended with any serious symptoms. After this the urine was naturally evacuated, but at each application of the instrument the same difficulty was manifested, and the same means employed with success.

THE

London Medical and Surgical Journal.

Saturday, December 13, 1834.

ANATOMY BILL.

There has not, perhaps, been a subject for a long period which has so much engrossed the attention of medical students, as the "ill working" of the present Anatomy Bill, and we regret the inefficiency of its operation as much as they do. It is a subject of ineffable interest—one which involves the great interests of the profession, and one which should claim the attention of those to whom and by whom its primary and great principle should be carried into execution. The pupils of this metropolis very justly raise an outcry against the operation of this Bill. They say, very properly, that during the period of resurrectionism bodies could be had for dissection, despite the presumed moral dereliction, the high price of bodies,

and the difficulty of obtaining them; yet we could dissect—now we cannot. The present Bill, which was to have removed all such disabilities on the subject, is but an interference to our obtaining those privileges which we did possess, and which were expected to accrue in a tenfold degree.

The universal complaint is, by pupils, "we have not subjects for dissection during the present session, the number has been fewer than it has been for years," *ergo*, the present Bill is either fundamentally bad, or not carried efficiently into execution, or there is an inequality in the distribution; and there seems good reason for a suspicion that the latter is the case. Dr. Somerville is a respectable man—highly so—but even he may be subject to some of the ills that human flesh is heir to; be disposed to favour the schools with which he may be intimately, publicly, privately, or professionally connected. But we do not wish to assert—nor even so much as to insinuate—that he would commit so great an outrage on his professional brethren, nor so great a dereliction of duty in his public capacity, as to favour the individuals connected with any certain school or schools. We nevertheless think it would be desirable, nay of essential service, that it would afford great satisfaction, were it to be announced in the medical periodicals the *number of subjects sent to each school*, previously informing the medical world of the number of pupils in each; and thus they would be enabled properly to estimate the equality or non-equality of the distribution. Dr. Somerville knows that, with reference to the hospital schools, it is impossible to avoid the anatomical lecturers possessing a certain supply of subjects. He admits that in a large hospital, where deaths are of almost daily occurrence, there must be out of the number many who die unclaimed by friends, and who are therefore (under the proper limitations) claimable by the schools of anatomy. The hospital schools, therefore, seem naturally to possess the right of claiming those bodies; but when we view the subject further, it becomes palpable that they have not, unless they resign their claim to those bodies that die elsewhere. In the hospital schools we would admit their possession, and even their right, to those bodies which die in their respective hospitals; but, in addition, we would withhold awarding them an equal share of the bodies from other institutions, which are unclaimed, and therefore appropriable. If all the unclaimed bodies that die in the various eleemosynary institutions in this metropolis were given up for dissection, the supply would be amply sufficient for every purpose—abundantly so—this is generally admitted. But in many parishes, where the pauper bodies are exceedingly numerous, the parochial officers exercise their little brief authority, and deny their being sent to the schools. In Whitechapel, where the subject was but recently discussed, and loudly so, some of the refractory members of the parish—some of the oppositionists—proposed that a notice should be placarded in the workhouse, informing the inmates that, provided they but expressed a wish, in the presence of two individuals, not to be dissected, they would be relieved from such a disgrace—they would not be dissected after death. The motion of giving up the bodies was carried, and the subsequent proposition, very properly discarded. Many other parishes likewise refuse on similar grounds. What grounds?—Mutilation! Religious Doctrines! Respect for the Dead! (Psha!) The Act is not compulsatory, and the parish officers know the fact, and it is only by private or per-

sonal interest (under existing regulations) that they could be persuaded to consent; thence we see the advantage of the Teachers of Anatomy, in their respective parishes, endeavouring personally to convince those individuals of the benefit that would accrue to the public from an extension of such a meed, and the injury it must otherwise inflict on society and themselves. Either this must be done, or there must be a second edition of the Bill, introducing new clauses, and one to the purport, nay, in short, expressly commanding each parish to give up its unclaimed dead. Such a clause would relieve all the difficulties with which the Anatomical Teachers and the Pupils have to contend. The principle is admitted, that anatomical study must be pursued, and be prosecuted by dissecting the body itself. Without such means the study *cannot* be pursued,—then the legislature should make it peremptory, that every person dying, unclaimed by friends or relatives, shall be transmitted to the Anatomical Schools for dissection, and that any individual connected, or not connected, with any eleemosynary institution, who shall prevail, or attempt to prevail, by persuasion, or otherwise, on any individual, to express a wish not to be dissected, that the said person so acting shall be regarded as acting illegally. Bodies must be had for dissection,—they must, and will be had,—and, unless the present system operates more efficiently than it has done, this session, English students will be compelled to embark for France, or other climes where bodies can be had; or the evil days of resurrectioning will be reproduced in all their hideous deformity.

We have heard from the best authorities, viz. from the Anatomical Teachers at the various schools, that since the inquiries which have been recently instituted by the Secretary of State and by the College of Surgeons, that the subjects have been more plentiful than at the very commencement of the session; and we have no doubt but that, if the students are quiet,—do not make known their sentiments to the *public* under the form of meetings for the best means of procuring subjects for dissection, and that writers in the public prints will cease their scribbling, and repress their *over*-zeal for the cause of anatomy,—subjects may easily and soon be obtained. Chivalry may be very pleasing in a romance, but it is alien to the science of medicine.

Some plan is *brewing* which will soon be accomplished, and effect such arrangements, that anatomy can be properly studied in the English schools.

THE ACONITUM NAPELLUS, OR MONKSHOOD.

To the Editors of the London Medical and Surgical Journal.

Gentlemen,—I enclose a case, treated in St. Thomas's Hospital, hoping that you may think it worthy of a place in your Journal, as a means of bringing into notice a new method of applying an old remedy, and of using it in a new and more active form.

I am, Gentlemen, your obedient servant,
Medicus.

St. Thomas's Hospital, Dec. 9, 1834.

The Aconitum napellus, or monkshood, has had various degrees of reputation as a medicine, since it was first used by Stoëk, about the beginning of the last century. It has frequently been highly extolled for relieving neuralgia, and the pain of chronic rheumatism, and other diseases. The late Dr. Duncan says, "I have lately used it with decided, though not always permanent success, in some cases of sciatica, and its effect in suspending the pain was always accompanied by a tingling sensation in the affected part, sometimes increasing to such a degree, as to render the intermission of the remedy necessary, when the pain would return, but mitigated; and thus, at last, by the repeated exhibition and omission of the aconite, the disease was sometimes finally removed." In these cases the aconite was given internally, and I have never heard that it has been used as an external application.

Of late years, the active principle of this, as of many other plants, has been supposed to reside in an alkaloid. Dr. Roots has taken advantage of the discovery of the alkaloid aconita, and thus, has not only been able to apply the remedy in a concentrated form, but has avoided the disappointment which may arise from the uncertain strength of the leaves or extract. The following case will show the value of this remedy as an external application.

Mary Anne Huntingford, a servant, æt. 28, was admitted into St. Thomas's Hospital, under the care of Dr. Roots, April 3rd, 1834. She then stated, that she had been subject to paroxysms of pain in the loins, thighs, and legs, for more than two years, which had gradually increased. She had been in the hospital, under Dr. Elliotson, in January last, by whom she was at first freely depleted, after which the disease assumed an intermittent form, and she then took large doses of quinine, and was slightly relieved by it, but left the hospital before she was well, and soon became worse.

At the time of her second admission, her general health was not impaired. She was subject to paroxysms of pain, generally two every day, in the loins, hips, thighs, and legs, following the course of the sciatic nerve. The pain was of a severe, cutting kind, and attended by some twitching of the muscles. There was tenderness on pressure of the lumbar vertebræ, and along the whole course of the sciatic nerve. The paroxysms of pain came on and ceased suddenly, and without any warning; they did not observe any regular intervals, and were of variable duration, often continuing for several hours; and in the intervals she was seldom free from uneasiness. Has no symptoms of hysteria; menstruation regular.

Quinæ sulph. gr. v.
Ferri sub-carb. ℥ ij.—6ta quaque horâ.
Empl. canth. sacro.

April 9th. No change.

Ferri carb. ℥iij. extr. stramonii, gr. ss. 6tis horis.

On the 12th the paroxysms were of rather shorter duration, but returned as frequently, and were quite as severe as ever. The quinine was increased to gr. vij., and the iron to ℥iv. in each dose. On the 14th she had no pain, and only a little on the evening of the 16th. Quinine increased to gr. x. in each dose. The intermittent character of the pain continued to the 30th, and the paroxysms had gradually become less severe and of shorter duration. The stramonium was omitted on this day, as the sight had become affected by it.

May 3rd. The improvement had continued, and the quinine was increased to gr. xv. From the 9th to the 24th she suffered from headach and sickness, but the medicine was continued, and the pain abated. On the 24th the iron was increased to ℥vi., and on the 28th gr. $\frac{1}{6}$ of muriate of morphia was ordered with each dose.

June 11th. The pain still better, and intermitting, but, in consequence of continued headach and sickness, all the medicines were omitted.

Ung. veratri (℈j. ad ℥j.) ℥j. ter die lumbis

On the 14th the pain had become more severe, and the quinine, carbonate of iron, and muriate of morphia, were gradually resumed, and increased up to August 23rd, at which time she was taking

Quinæ sulph. ℈j.
Ferri subcarb. ℥j.
Morphiæ muriat. gr. $\frac{1}{3}$, 6tis horis.

These medicines were omitted for four days, during which she took some creosote; but the pains returned immediately after the medicine was changed, and continued to increase. The old medicines were resumed, and she quickly improved, as before. She left the hospital on the 22nd Sept. of her own accord; the pain had diminished much in severity, returned much less frequently, and not at any regular intervals.

The pain soon increased, but never attained its original severity. She was again admitted into the hospital under Dr. Roots, Nov. 21st. The pain was of the same character, and in the same situation, as before; commencing in the loins, and afterwards affecting the gluteal muscles, and extending down the back part of the thighs to the hams and heels. The paroxysms usually came on about 7 P.M., and continued four or five hours. During the attack the muscles were firm and contracted. There was some tenderness of the gluteal muscles at all times. General health good; pulse 75, feeble.

On the 25th, the following ointment was ordered:—

Aconitæ, gr. ij.,
Ung. cetacei, ℥j., ft. ung. et infricet pars sexta part. dolent. nocte maneq.

On the 28th, she stated that after each application of the ointment, the parts rubbed became hot and smarted, but this was quickly followed by numbness. After the third application the pain was a little relieved, and after the fifth, the amendment was very remarkable. The paroxysms were much diminished in severity, and did not continue more than one or two hours. The pain, which had formerly been very acute, she described as being much less severe, and called it a "burning twitching." The parts were less tender on pressure, and she could sit up without causing pain in the gluteal muscles, which she could not do three days since.

Infricet. unguent. ter die.

Dec. 2nd. Two days since, in the morning, she had a more violent paroxysm of pain than she has had since her admission. After it had

continued an hour and a half, the ointment was applied, and in ten minutes she was much relieved. The paroxysms do not now last more than twenty minutes, and she says they have never been so slight before.

6th. The pain has now resumed its intermittent character. On the 3rd, 5th, and 7th, she had a short and slight paroxysm in the evening, each being less severe than that preceding it.

Quinæ sulph. gr. v., 6tis horis.

9th. The pain returns every other night, but is gradually decreasing in duration and severity.

There is a man in Luke's Ward, under Dr. Roots, who has a painful affection of the sciatic nerve, for which he used veratrine ointment for some time without any benefit. He has used the aconitine for a week, and a very decided mitigation of the pain followed its application.

Dr. Roots informs me that he has used the same remedy in private practice in three cases with similar success.

British Hospital Reports.

WESTMINSTER HOSPITAL.

Fractures of the Cranium.

Case I.—*Fracture of the Orbital Process of the Frontal Bone—Wound of the Right Anterior Lobe of the Brain.*—James Kelly, ætat. 6, residing at No. 2, Snow's Rents, was admitted January the 18th, in Anne's Ward, under Mr. White. The child had been knocked down by having an old door or gate, which had been taken off its hinges, pushed upon him; he was immediately carried to a surgeon in the neighbourhood, who suspected the existence of fracture, and sent him to the hospital. When he came in, a lacerated wound, about an inch or an inch and a half in length, above the right superciliary ridge, and part of the bone was plainly seen, deprived of its periosteum; the lips of the wound were very much separated, the eyelids ecchymosed and tumefied, closing the eye; a small contused wound was also discovered on the back part of the head, and rather to the left side; pulse exceedingly small and slow, not exceeding sixty beats in the minute; skin and extremities cold; the boy sensible, and in great pain. The head was shaved, two sutures placed in the wound of the forehead with adhesive plaster, and simple dressing to that at the back part of the head.—Aperient powder; to be kept quiet.

19th. Powder did not operate, is therefore to have a dose of house-physic at once. Complains of great pain in the head; pulse 76, regular in the strength and frequency of its beats; tongue slightly furred; eyelids extensively ecchymosed; cold lotions have been applied to the head, and are to be continued, as they appear to have afforded considerable relief. Mr. White directed the application of any simple ointment between the eyelids to prevent their sticking together, and causing an accumulation of tears, an accident which he has seen cause ulceration of the cornea.

20th. He continues in great pain, which was somewhat relieved when the sutures were divided; leeches have been been applied. He screams when any degree of pressure is exerted over the orbit; the edges of the wounds are beginning to suppurate. He continued perfectly sensible till the evening, when he expired.

Autopsy.—Considerable effusion of dark coagulated blood was found under the scalp, over the orbit, and at the back of the head; two fractures were discovered in the frontal bone, unaccompanied by depression. The skull having been sawed through, and the brain removed, a fracture of the right orbitar process of the frontal bone was discovered, involving nearly the whole process, and the fractured portion so raised that its rough edge had lacerated the anterior lobe of the brain on that side. There was a little more fluid in the ventricles than usual.

Case II.—*Fracture of the base of the Cranium.*—Richard Rawlings, ætat. 69, a shoemaker, residing in Horse-shoe Alley, York-street, was admitted into Percy Ward, July 1st, under Sir A. Carlisle. Half an hour previous to admission he fell down backwards into an uncovered cellar in Hungerford Market, being rather tipsy at the time. He was taken directly to the Charing Cross Hospital, but there being no one who could attend him, he was sent to a chemist in the neighbourhood, who bled him to sixteen ounces while in collapse, and then had him conveyed to the Westminster Hospital. On examination he presented the following symptoms: stertorous breathing, inspirations short, hurried, and very audible; expirations scarcely perceptible; pulse 50, small and slow; hæmorrhage from the mouth, nose and left ear; pupils considerably dilated; cornea dull; eyes half closed; body cool; is perfectly insensible and motionless: the only indications of life which he presents are the stertorous breathing and the pulse.

The head was shaved, and a lacerated wound found at the back of it, but rather to the left side; this was carefully examined with a probe, but the existence of a fracture could not be ascertained. He is said to have been sensible previous to the bleeding, and to have become insensible immediately afterwards. Mr. W. B. Lynn was sent for, and saw him in an hour and a half; he made an incision about two inches and a half long, but could not discover any fracture. The wound bled very freely; the pulse became slow and laboured, 45, had been 60. The left pupil became contracted to a point, the right remaining dilated and insensible; has had some brandy; breathing more and more difficult. He died between one and two o'clock A.M. next morning.

Autopsy.—A fracture was discovered, extending across the body of the sphenoid, its alæ, and through the temporal bones, lacerating the inferior petrosal sinus. There was also considerable effusion of blood.

Case III.—*Fracture of the Cranium—Injury of the Middle Meningeal Artery—Fracture of the Femur.*—William Isaac, æt. 38, was brought to the Westminster Hospital about half-past seven in the evening of Nov. 24, 1834, in consequence of having been knocked down and run over by a cab. It could not be ascertained whether either of the shafts had struck him, or he had fallen with violence on his head. His symptoms resemble those of extreme intoxication; in spite of his left thigh being broken and the soft parts very much bruised, he was very anxious to get up and walk about, and was with difficulty restrained. He had one hundred minims of the liquor opii sedativus about eleven o'clock. He continued very noisy and troublesome during the night, and required to be watched, to prevent his getting out of bed, but towards morning he became quieter; his replies were irrational; he insisted that he was quite well; felt no pain or inconvenience, and was urgent to be allowed to leave his bed. The head was examined, but no indications of a fracture could be discovered; there were marks of a bruise about the left mastoid process. In the course of the next night he was exceedingly restless, and in a state of frequent jactitation; pulse 92, frequent and full; apparently maniacal, unattended with delirium; there was slight heat of scalp, and the skin was rather hotter than natural; pupils contracted. He has been freely purged, and he was bled last night from the arm; after twelve ounces had been abstracted, a violent fit of shivering came on, and lasted some time; consequently the bleeding was arrested. The broken limb hitherto had not been put up in splints; he was now placed on Amesbury's fracture bed, and the pelvis and foot made the points of extension and counter-extension; the small splints were not applied. Shivering having come on during this proceeding, he had a small quantity (seven minims) of the liquor opii sedativus.

The head was afterwards shaved, and cold applied; he was kept under restraint. Very little change took place in the course of the next few days, with the exception that he was occasionally rather more sensible, and once or twice seemed conscious of his condition. Pulse quick, rather hard, and frequent, 96; puts out his tongue when directed, which is clean; answers some questions correctly, but is generally very incoherent.

Dec. 2. Is evidently becoming much worse; has incomplete paralysis of the left side of the face. Since yesterday has laboured under convulsive spasmodic action of the whole body, of an epileptiform character, occurring frequently during the day. During the fit, if it may be so called, the paralysed part acts, but not so freely as the other side. The spasms recur now every ten minutes or quarter of an hour, and are increasing in violence. The skin remains cool, and the pulse is softer. He is totally insensible to passing affairs, but puts out his tongue when directed, although with hesitation. The tongue is clean, and rather drawn to the right side. Is taking diaphoretic mixture. The nape of the neck has been blistered, and he is now ordered to be cupped to ℥ xij.

3rd. He continued much the same during the night, the fits recurring more frequently and with greater severity; they are now (1 P.M.) almost constant, with a very rapid and very small pulse, 160; skin covered with cold, clammy sweats; mouth partly open; and, in fact, he is *in articulo mortis*. He expired in the course of another hour.

His wife says that he was a very regular and sober man, and she never knew him stay from home beyond his usual time since their marriage. He was married sixteen years ago. He left home that morning about half-past five, to go to his work in Compton-street, Soho, and quitted that place at six to return home to Lambeth, when, in passing through Bridge-street, Westminster, he was knocked down by a cab. She has no reason to believe he was at all in liquor at the time.

Permission was obtained to examine the body, but with great difficulty. The external appearances were great muscularity of the whole frame, recent cupping marks on the temples, and abrasion of the cuticle of the nucha where the blister had been applied. On turning back the scalp, some coagulated blood was found on the left side of the head; the calvarium was then removed, a fracture was found in the left parietal bone, above the squamous suture, and considerable effusion of blood, which had coagulated on the left side, and extending forwards under the anterior lobe, and downwards to the base of the brain. The left anterior lobe was softened, and partly mixed with the coagula. The middle meningeal, or spinous artery, was found ruptured, as it passes through the dura mater, and from it the hæmorrhage had proceeded. The thigh was examined, but neither the chest nor the abdomen. The fracture was about three inches and a half from the knee-joint; the upper portion was riding on the lower to the extent of two inches, and its margin, together with the upper surface of the inferior extremity of the bone, was rendered quite smooth by the friction which had taken place. Perhaps a better example of the manner in which bony union occurs has been seldom seen. The medullary parts of each fragment were covered with lymph, evidently organised, and highly vascular, and this proceeded downwards from the upper to the lower one, uniting with lymph effused and organised by the periosteum. On either side of the part which had been rendered smooth by the upper portion, the periosteum had taken on the same action. There

was also considerable effusion of blood in a coagulated state around the fracture. The rectus femoris had shortened itself considerably, and illustrated well the condition of muscle fibre after death, when it had been in a tetanic state. It was rigid, and felt irregularly hard when pressed, very like the feel of a carcinomatous tumour; and its fibres, naturally oblique, had assumed a transverse position, but slightly zigzag in their course. It would have been interesting to have examined them beneath a powerful microscope, so as to have ascertained whether the primitive fibre displayed the character it does when in a state of contraction, as seen by Prevost and Dumas, &c. in the healthy living fibre.

ST. GEORGE'S HOSPITAL.

Fractured Ribs.

A MAN, named William Gadd, was admitted under the care of Sir Benjamin Brodie (it being his accident week), having received a severe injury of the ribs and chest from a heavy beam of timber falling upon him. On his admission he was immediately bled and put to bed, and a bandage put round his chest, and a purgative dose administered, to be followed up by salines. Sir Benjamin Brodie visited him soon after his admission, and approved of the plan of treatment pursued in the case, ordering the house-surgeon to continue or alter it according to the symptoms. The man continued to go on very well until the following morning, when he appeared to be materially improved, and had rallied considerably, but in a few hours he began to sink, and died shortly afterwards rather suddenly.

The circumstance of his sudden death excited a degree of anxiety respecting the cause of death, and we attended the autopsy by the advice of Sir B. Brodie, who ascribed the death to some secondary internal hæmorrhage, which he remarked would sometimes occur after severe accidents injuring internal organs, and of which he instanced several cases occurring after injuries of the brain.

Autopsy.—On cutting through the abdominal muscles there were found many patches of coagulated blood effused in the cellular membrane between the muscles, as well as between the pectoral muscles of the right side of the chest. On cutting through the sternal cartilages, both cavities of the chest were found to contain a large quantity of effused blood; the right lung was collapsed, and on the right side ten ribs were found fractured (all but the first and last) posterior to their angles. One of these had perforated the pleura, and wounded the substance of the lung. On the left side the lung was not collapsed, but four ribs were found likewise fractured on this side, none of which, however, had perforated the pleura. On examining the abdomen there was found a large mass of blood effused behind the lumbar surface of the peritoneum; the peritoneal coat of the intestines was of a dingy red; the liver was healthy, and the external surface of the spleen was pale, and the internal surface hard and granular; the membrane surrounding the kidneys was loaded with blood, and the upper surface of the left kidney had received an indentation from a superincumbent coagulum of blood. Mr. Cæsar Hawkins remarked that such an excessive hæmorrhage could but have proceeded from a large blood-vessel; but although a careful examination was made to discover it, and a portion of the abdominal aorta and some of its branches were found partially ossified, no rent in any vessel of magnitude could be discovered.

When he was admitted, there was found to be extensive emphysema of the right side of the chest, from a wound in the lung of the same side; this circumstance led Sir Benjamin Brodie to make some general clinical remarks upon wounds of the chest, and their consequences, of which we have preserved the following notes.

"This man, gentlemen, had emphysema, and a bandage was very properly applied around the chest by Mr. Patten, the house surgeon, for the relief of this. Formerly, you know, it was the practice of surgeons not to apply a bandage around the chest where there was emphysema, as in a case like this; but it was Sir William Blizard, who, somewhere about one hundred years ago, first proved the possibility and practicability of applying a bandage in these cases. This man has got fractured ribs;—now, ribs may be fractured in two ways, either by a blow which simply fractures them, or by a more violent one, which drives their rough fractured ends inwards into the substance of the lungs. This has been the case in this instance, and, consequently, there is emphysema; and, from the depressed state of the man's pulse, there may most probably be some slight internal hæmorrhage also. The air effused into the cavity of the chest is very soon absorbed in these cases. I suppose the absorbents take it up, for they always act more rapidly after a good smart physicking and bleeding. It is not carried into the circulation, for you know that if air gets into the veins it causes immediate death. Blood which may be effused in these cases has been known to remain in the chest for a considerable time unabsorbed; a remarkable case of which you will find in Pelletan's "Clinique Chirurgicale." In large fractured wounds of the chest the lung will sometimes protrude through the opening; and in some experiments which I formerly made upon animals, I found that the greatest difficulty in the way was from the protrusion of the lungs externally. This species of pulmonary hernia does not happen in inspiration but in expiration, when the depression of the ribs appears to force the lung out. The way to reduce this is, gently to press the protruded portion back in inspiration, and to close the external aperture. It is difficult to say to what extent the lungs will bear wounding; but I suppose that any thing which severely injures their

lobulated cellular texture would be likely to prove fatal."

Case of Stricture (continued from p. 670).

"I have not met with a case similar to this, which baffled all my efforts for, I suppose, twenty years. It was evident to me that this case was one that was not to be cured by ordinary measures. Thus the patient went on suffering excessive pain every day; and I saw that if something effectual was not done for him he would die, as the urethra might burst, or the kidneys or bladder might become severely affected. It therefore became an imperious duty seriously to consider what might be done for him. His general health was suffering from long confinement in the hospital, and I sent him out for a short time to recruit his health and strength, and when he came back he was desirous of going through anything for his relief. I then thought of what had been usually done by other surgeons in such cases. I had heard of a staff and a probe being passed through the stricture, and its being divided in this way. Such a plan was thought of, but, I believe, it was never put into practice. I have heard also of surgeons cutting through the bulb of the urethra and corpus spongiosum, but there would be immense hæmorrhage in performing such an operation; the corpus spongiosum is well known to bleed more readily than any other part of the body, and if the artery of the bulb be divided, how, with the hæmorrhage, is he to see the orifice of the stricture? I think such an operation is unsatisfactory and bad in practice. In one of these cases the surgeon was so frightened at the alarming hæmorrhage, that he left the operation unfinished; in another it did not succeed and the patient died; and, in a third, it lasted one hour and a half, and I do not know what was the ultimate result.

"A method has been proposed by Mr. Stafford for curing these cases by passing a catheter armed with a lancet down to the seat of stricture, and lancing it several times in the same way that you lance an enlarged tonsil gland. I do not, however, consider this instrument to be a good one to be used in long, old strictures; in dividing them with this instrument, all that is perhaps necessary is to keep the instrument and to make your incision directly in the median line and in a straight direction, and you must in time cut through the stricture; but the difficulty is to do the operation in this perfectly straight manner, for if you diverge only one-tenth of an inch out of the straight line, you directly make a false passage. On the dead body this operation may do very well, but we require it on the living body. The slightest motion or jerking of the patient during the operation may cause a false passage, and give the instrument a wrong direction.

"In the course of a fortnight, the febrile symptoms which we have noticed above completely subsided, and the man was able to bear an instrument to be passed down to the stricture, which was found to be still very hard and unyielding. The passage of the instrument caused great pain, and on one occasion the urethra suddenly filled with pus, an abscess in one of the lacunæ of the urethra having been ruptured by the point of the bougie."

Sir Benjamin Brodie ordered the man to be kept at perfect rest, and foment-cloths to be applied warm over the penis and surrounding parts. The discharge from the urethral abscess under this treatment diminished materially in the course of a week, at the end of which time Sir B. Brodie examined the parts very carefully. A silver sound was passed very gently down to the anterior portion of the stricture, and retained there, whilst the index finger of the operator's left hand was passed through the wound in the perinæum to the posterior wall of the stricture, and the sound then gradually forced downwards with a view of overcoming the resistance of the stricture, and a slight excision with a scalpel was made through the posterior boundary of the stricture, but all attempts were ineffectual.

At this period of the case Sir B. Brodie left town, and the patient was left under the care of Mr. Walker, who finding a recurrence of the former febrile symptoms, ordered the saline medicines to be continued, and desisted from all attempts at forcing a passage through the stricture. Upon Sir B. Brodie's return to the hospital, some further attempts were made, which were eventually successful, and a small gum-catheter, armed with a stilette, was passed through the contraction, and left in the bladder for some time; the urine was thick and ropy, but eventually, as the contraction widened and the bladder could be freely emptied, this disappeared and the urine became more healthy. The man was frequently troubled with flying pains about the region of the pubes, prostate gland, perinæum, and neck of the bladder, which were always relieved by warm anodyne fomentations; one or two small abscesses formed and burst, but were attended with no further inconvenience.

It would be useless to notice the various daily reports of such a case, the curative restoration of which must be necessarily tardy; the amount of them may, however, be summed up in the statement of the man's progressive improvement and recovery up to the present time. A full sized gum-catheter without the stilette, can now be passed through the stricture, and the only inconvenience it causes is at the neck of the bladder, where some little irritation still exists. When last we saw him, he was up, and walking about the ward, and looking very well. He could pass the gum-catheter himself, which Sir B. Brodie told him to desist from, and requested the house-surgeon to pass the instrument himself twice every day.

APOTHECARIES' HALL.

Names of Gentlemen to whom the Court of Examiners granted Certificates of Qualification on Thursday, 4th Dec.:—Walter Watson, Grandborough, Warwickshire; Jas. John Garth Wilkinson, ———; Edw. Pope, Chippenham, Wilts; John Smith, Wigton, Cumberland; James Titterington Jameson, Ashton-in-the-Willows; James Watson, Sheffield; John Chas. Atkinson, ———; John Arton, Earl Shelton, Leicester.

MISCELLANY OF FACTS.

Meeting of the British Association in Dublin.—A communication, similar to the following, has been forwarded to various public institutions in Dublin:— Trinity College, Dublin, Dec. 5, 1834.

Sir,—At a meeting of the Managing Committee appointed to consider the arrangements necessary for the reception of the British Association in Dublin next year, it was resolved, "That the managers of such public establishments in Dublin, as may be objects of general interest, be requested to open them to the members of the Association on the exhibition of their tickets during the week of meeting, and the weeks preceding and following." I am, accordingly, desired to apply, through you, to the College of Surgeons, and to express the wish of the Managing Committee, that the Museum and the other parts of the establishment belonging to the College may be thrown open to the members of the Association.

I have the honour to be, Sir,
Your obedient humble servant,
H. Lloyd,
Sec. British Association.

The President of the College of Surgeons.

APPOINTMENTS.

Naval.—Mr. D. Kennedy (1818), to be surgeon of the Nimrod. Mr. J. Christie, assistant-surgeon to the Curlew.

Military.—Staff Assistant-Surgeon J. Trigance has been appointed surgeon of the 30th Foot, vice Piper, M.D., who has been appointed to the Provisional Battalion.

General.—Mr. B. H. Northgate, surgeon-accoucheur to the new Lying-In Hospital, Norwich. Mr. T. S. Fletcher, of Chesterfield, house-surgeon to the Bury (Lancashire) Dispensary, out of twenty competitors. Mr. Samuel Heald and Mr. George Morley Turns, surgeons in Leeds.

DEATHS.

At Malta, Apothecary Shower. Mr. Anthony Shepherd, surgeon, of Coleman-street, City of London. Mr. William Hervey, of Bridekirk, Cumberland, surgeon. Mr. Thomas Allen, of Wells, Somersetshire, surgeon. Mr. Jas. Holmes, surgeon of the Killygordon Dispensary, Ireland. Mr. William Brennand, of Broad-street, London, surgeon. In Jamaica, Dr. Wm. Forsyth Grant, late of Urquhart, Inverness. Mr. Thomas Maxwell, surgeon of the Tyne County Infirmary.

WEEKLY BILL OF MORTALITY.

London, Tuesday, Dec. 9, 1834.

Abscess	7	Inflammation	125
Age and Debility	157	Inflammation of the Bowels & Stomach	22
Apoplexy	27	Inflammation of the Brain	15
Asthma	60	Inflammation of the Lungs and Pleura	31
Cancer	8	Insanity	5
Childbirth	19	Jaundice	2
Cholera	32	Liver, Diseased	22
Consumption	253	Locked Jaw	2
Convulsions	98	Measles	41
Croup	8	Miscarriage	5
Dentition, or Teething	21	Mortification	10
Diarrhœa	4	Paralysis	7
Dropsy	47	Small Pox	30
Dropsy on the Brain	37	SoreThroat&Quinsey	1
Dropsy on the Chest	1	Spasms	3
Epilepsy	1	Stone and Gravel	2
Erysipelas	1	Thrush	4
Fever	52	Tumour	2
Fever, Scarlet	30	Venereal	1
Fever, Typhus	9	Worms	1
Heart, Diseased	7	Unknown Causes	162
Hernia	1	Stillborn	40
Hooping-Cough	59		
Hydrophobia	2		
Indigestion	3		

Males 712 Females 775 Total 1487

Increase in Burials reported this week 1070

BOOKS RECEIVED.

An Introductory Lecture to the Medical Classes in King's College, London. By Herbert Mayo, F.R.S., F.G.S., &c. Read Oct. 1, 1834. Burgess and Hill.

An Essay on the Deaf and Dumb, showing the necessity of Medical Treatment in early Infancy, with Observations on Congenital Deafness. 2nd Edit. By John Curtis, Esq., Aurist in Ordinary to his Majesty. 8vo. pp. 211. 1834. Longman.

CORRESPONDENTS.

The Lectures of Dr. Stokes will be continued.

Reminiscences of a Medical Student in our next.

H. S.—For the future we shall continue monthly the Meteorological Journal.

Mr. Dendy's communication in our next.

Our Paris Correspondent.—We have not received the case he mentions. All other communications have arrived safe.

We cannot insert the communication of *H. S. P.* We should have noticed long ago the instruments he alludes to, but we will not enter into a controversy on the matter. There cannot be a doubt as to the preference, The instrument invented by Weiss is superior to that invented by M. l'Estrange in many respects; and we believe any surgeon, about to operate, would not for a moment, if he compared the two, hesitate in his choice.

Erratum in our last Number.—Dr. *Hope* was the Assistant-Physician elected to St. George's Hospital, and not Dr. *Dunlop*.

METEOROLOGICAL JOURNAL.

MONTH. Dec., 1834.	Moon.	Thermom.			Barometer.		De Luc's Hygrometer.		Winds.		Atmospheric Variations		
4		49	52	42	29·96	29·86	77	79	S.	S.	Fine	Fine	Fine
5		45	45	44	29·99	29·87	79	81	S.S.W.	S.S.W.	——	——	——
6		45	48	43	29·99	29·96	81	79	S.S.W.	S.W.	——	——	——
7		45	52	43	29·94	30·22	79	80	S.	S.W.	——	——	——
8	☽	49	51	39	30·22	30·30	80	77	W.	W.S.W.	——	——	——
9		40	45	36	30·31	30·10	77	77	W.	W.S.W.	——	——	——
10		45	48	36	30·27	30·29	77	76	N.	N.W.	——	——	——

50, *High Holborn*. William Harris and Co.

All Communications and Books for Review to be forwarded (free of expense) to the Publisher, 356, Strand, near King's College.

THE

London Medical and Surgical Journal.

No. 151. SATURDAY, DECEMBER 20, 1834. Vol. VI.

LECTURES

INTRODUCTORY TO THE COURSE OF THE

INSTITUTES OF MEDICINE,

DELIVERED BY

ROBERT J. GRAVES, M.D.,

King's Professor, Dublin.

LECTURE III.

Gentlemen,—I shall proceed to take up my subject where I left off on yesterday. I laid before you some considerations respecting the influence of light on animal and vegetable bodies, and spoke of the curious fact of a vast proportion of our globe being covered by a mass of dark unfathomable waters, to which no ray of light ever penetrates.

When we examine the ocean more attentively, and with a view of discussing the question, whether any of its countless inhabitants are tenants of that portion of the black abyss where daylight never enters, we find reason to believe that the great majority of marine animals inhabit the upper portion of the deep, or those shallower parts which lie in the vicinity of continental or island shores; in fact, that by far the largest quantity of life courts the surface, and that a very small proportion dwells beyond the point to which the rays penetrate *. But with respect to the question before us, there can be no doubt that the absence of light is unfavourable to vitality, and this appears to be the reason why we observe life so abundantly diffused in the neighbourhood of coasts, where nature has spread out a considerable extent of sea within soundings, and rarely amounting to one hundred fathoms in depth. If you take that portion of the sea surrounding Great Britain, which lies within one hundred fathoms, you will find it to extend from Norway over the German Ocean, and so on by France to the coast of Spain, which, with the quantity of sea within the same depth which encompasses these islands, will give you an extent of surface as large as all Europe, the greater part of which receives some portion of light, and is consequently a fit habitat for living creatures. Hence it is, too, that shoals and sand-banks, such as we find near the coast of Newfoundland, teem with millions of living beings, furnishing, year after year, those inexhaustible swarms of fish, which afford employment and food to so many thousands of our countrymen.

I regret that the data in my possession do not enable me to answer the question directly, as to whether the dark and rayless regions of the deep are wholly tenantless. It is true, that Biot, as quoted by Pouillet, speaks of fishes which usually live at a depth of from five to six hundred fathoms. It is perfectly obvious, that if any species of fish were destined to live in darkness, it would be quite contrary to the economy of nature to give them eyes, and as all known fishes have eyes, their natural abode must be far above this depth, and within the zone of light to which the red rays penetrate, and this we have already seen does not exceed one hundred fathoms. Wherefore, until such fishes are discovered, and it has been established that they are without eyes, I should be unwilling to admit that any species of fish are inhabitants of the dark abyss. This assertion is also disproved by the fact, that fishes, which live at a great depth from the surface, are generally furnished with very large eyes; thus we find, that the pomatomus telescopium, which is fished up from a great depth near the coast of Nice, possesses a very large visual organ. If any thing further were necessary to show that this position was untenable, it would be the palpable absurdity of nature giving unusually large eyes to fishes inhabiting low situations,

* The red appearance of the sun, when near the horizon, or when viewed through a dense fog, affords a familiar illustration of the rapid loss of the other component parts of the solar ray in penetrating through certain media. Another curious illustration is mentioned in the *Saturday Magazine* for Aug. 18, 1832:—"The ephemera, or day flies, which are, in the height of summer, ever sporting over rivers, pools, and streams so thick that they, in some instances, absolutely darken the sun, or *make its light fall red upon the ground.*

and merely ordinary eyes to those which dwell in parts far deeper and darker.

"It is a curious fact," says De la Beche, "that all the mollusca known to us have been found, with perhaps a few rare exceptions, with living animals in them, at depths less than one hundred fathoms." This furnishes a new and interesting subject for investigation, for it would seem to show that the depths of the ocean are untenanted, and that there is a vast space of it solitary and uninhabitable.

Other circumstances besides the absence of light are supposed to limit the depths at which animals and vegetables may exist. Thus it is said, that at great depths there is not a sufficient quantity of air combined with the water to answer the purposes of respiration. On this point, however, nothing certain can be affirmed, and those who imagine that air does not pervade the deeper parts of the sea, confine themselves to mere assertion. If the water in such situations was entirely devoid of air, neither fishes nor any other thing endowed with life could exist, for respiration is common to all. It has been inferred, indeed, from the composition of the air in the swimming bladders of fishes, that the oxygen of the atmosphere penetrates deeper into the ocean than the nitrogen, for the latter is found to be almost entirely absent, or only in the small proportion of one-tenth, in the bladders of those taken from a great depth, while in the bladders of those, which inhabit shallow waters, we find the air to consist of nearly pure nitrogen. With respect to this it may be observed, that the facts brought forward are quite insufficient to authorise us to draw any such inferences, and I think we should rather attribute the relative proportions of the constituents of air as found in the swimming bladders of fishes, not to the composition of the air combined with the water at any given depth, but to the secreting power of the air-bladder itself.

But, in addition to the absence of light and the supposed want of air combined with the water, it is plain that animals, living at great depths, must be calculated to bear enormous pressure from the vast mass of superincumbent fluid, and must be therefore of a different structure from land animals. Bodies on land are merely subject to the weight of the atmosphere, but if a man descends in a diving bell to any depth, he finds that he has become subject to a new and very considerable inconvenience from the increased pressure. At the depth of thirty-two feet he bears a double atmospheric pressure. Again, if he ascends a high mountain, such as Mont Blanc, his physical powers are much weakened by the diminished atmospheric pressure, and very dangerous consequences are apt to ensue, as I shall hereafter explain. "A creature (observes De la Beche) living at a depth of one hundred feet, would sustain a pressure (including that of the atmosphere) of about sixty pounds on the square inch; while one at 4000 feet, a depth by no means considerable, would be exposed to a pressure of 1830 pounds on the square inch. It will be obvious from our knowledge of the structure of animals generally, that we cannot, with any reference to that structure, more particularly that of the delicate vessels, suppose any one creature capable of sustaining such enormous differences of pressure with impunity. We cannot conceive that the same animal could live equally well near the surface and at a depth of 1000 fathoms, more than we should consider that a man would feel himself equally comfortable at small heights in the atmosphere, and at an elevation of 30,000 feet above the level of the sea." We may, therefore, safely conclude that all marine animals which are furnished with eyes live habitually within the depth of 100 fathoms; their organs of vision indicate the luminous upper stratum of the ocean as the usual place of their residence, beyond which the increased pressure they encounter in progressing downwards must prevent them from proceeding, except occasionally, and for short spaces of time. "Creatures living in the atmosphere, all other things being the same, would, however, suffer less in proportion from a given amount of vertical change of place than creatures living in the sea." Thus we find that the condor of the Andes darts from one of the highest peaks, along the western declivity of Pinchincha to the very brink of the sea, thus traversing all climates in a few seconds, from a pressure of barometer of twelve inches, to a pressure of twenty-eight.

Lyell mentions that when several companies were formed in England to work the mines in Mexico, some of the English miners who were sent over, being fond of field sports, brought some greyhounds with them, to have the pleasure of coursing on the Mexican mountains, which abound in hares. They found, however, to their great mortification, that the dogs were quite unable to come up to or catch the hares of Mexico. This is explained by recollecting that these greyhounds being transferred from the low and flat shores of England to a mountainous country raised several thousand feet above the level of the sea, and thus subjected to a considerable diminution of atmospheric pressure, became short-winded, and incapable of running down their game. But in the course of a few years, their offspring, who were born and brought up in the country, having their chests and respiratory system adapted to this elevated situation, proved themselves in running down hares fully equal to their parents in England.

I may observe here that some marine animals appear to possess the power of bearing enormous pressure. Thus the whale when harpooned, or when pursued by its enemies the narwahl and sword fish, dives to a vast depth in attempting to effect its escape. The sword fish which has harassed him near the surface, follows him until he can go no further, and then returns to the surface awaiting the return of the whale, who, being placed by

his deep descent in an unnatural condition, becomes so weakened by it, that when he returns to the surface he falls an easy prey to his enemies. Captain Scoresby observes, p. 135 of his work, "when attacked the whale generally dives at once to an immense depth." "It may assist our comprehension of the enormous load that the whale endures when it descends to the depth of 800 fathoms, which it is often known to do, to be informed, that the pressure of the water at this depth on the body of a whale must sometimes exceed the weight of sixty of the largest ships of the British navy, when manned, provisioned, and fitted out for a six months' cruise."

Such are the most interesting facts connected with the question, whether animals can exist at great depths of the ocean and far beyond the limits of light. On the whole, it would appear that we have not a sufficient number of data to enable us to determine the depths at which living animals may exist. I have expended more labour on this subject than it would seem worthy of (although it is by no means beneath the notice of the physiologist), but have not been able to satisfy myself as to the lowest situations in which invertebrated marine animals may exist, or whether those found at great depths be merely temporary sojourners or constant inhabitants of such localities. That some invertebrated animals live beyond the extreme limits of light, would appear from an observation made by Captain Scoresby, while on the coast of Greenland. He says, "the sea here not being unfathomable, as in the more eastern fishing stations, the line of the first fast boat had lain for some time on the bottom; on its being hauled in, several fine specimens of the beautiful species of star-fish, asterias caput Medusæ, were found clinging to it. The depth of water here was about 250 fathoms." Observe, here, these specimens of star-fish are described as being extremely beautiful, that is to say, their colours were strongly marked, and of great brilliancy. Now, reasoning from analogy, it would appear to me to be very unlikely that such distinct and brilliant colours could exist in these animals, if they had been born and spent their lives at so great a depth from the surface as 250 fathoms. We know that plants reared in darkness lose their colours, and we are also aware that the absence of light has a somewhat similar effect on animals, and therefore it is very probable that these star-fish were only temporary sojourners at this depth.

Let us now, gentlemen, proceed to investigate the influence of light on the vegetable world. I need not tell you that a vast deal has been written on the influence of light on plants; neither is it necessary that I should dwell on this matter, for you will find all that is known on the subject in Lindley's Botany, and various other similar works. You all know what delicate indices plants are of the different atmospheric changes connected with light; many of them unfold their beautiful flowers to the warm sunshine, but close them up as soon as the sun has been obscured by clouds. You are also acquainted with the fact that some plants open their flowers in the morning, others at noon, and others again in the evening, so that a person may thereby almost guess the hour of the day.

"It was long since remarked by Priestley, that if leaves are immersed in water and placed in the sun, they part with oxygen. This fact has been subsequently demonstrated by a great number of curious experiments made by Ingenhouz, Saussure, and Linebier. Saussure found that plants in cloudy weather and at night inhaled the oxygen of the surrounding atmosphere, but as soon as they were exposed to the rays of the sun, they expired the oxygen they had previously inhaled in about the same quantity as they had received it, and with great rapidity. Dr. Gilly found that grass leaves exposed to the sun in a jar for four hours exhaled a considerable quantity of oxygen. Heyne tells us that the leaves of *bryophyllum calcinum* in India are acid in the morning, tasteless at noon, and bitter in the evening; Link himself found that they readily stained litmus paper red in the morning, but scarcely produced any such effect at noon. The same phenomenon is also said to occur in other plants, as *cacalia ficoides*, *sempervivum arboreum*, &c. This stain in the litmus paper could not have arisen from the presence of carbonic acid, as that gas will not alter blue paper, but must have been caused by the oxygen inhaled at night. It has been found that this last power is retained even at noon if the plant is not exposed to the sun, a similar explanation of a phenomenon, remarked by Pagot de Charmes, who found that the flowers of the cichorium intybus were daily changed from blue to white, according to the action of light *. It is also well known that fruit is more acid in the morning than the evening.

I need not tell you that the flowers and leaves of all plants court the light; indeed this tendency is manifested sometimes in a very curious manner. You will see this exemplified in the various flowers which adorn the dark and comfortless abodes of the poor tradesmen in the Liberty. These poor creatures (for however poor the being is, or however confined by the nature of his employment, he never forgets the green freshness and living loveliness of nature) delight in

* I have no where seen an explanation of the very singular change of colour produced by heat in common fuci; I remarked it many years ago when employed in preparing a *hortus siccus*. When a hot smoothing iron is passed over the fronds of the *fucus serratus*, *f. vesiculosus*, or, indeed, of any of the common reddish-brown sea-weeds, their natural colour is instantly changed to a bright green, which is permanent; hot water effects the same change.

flowers and birds*, and among them you will frequently see a geranium, almost as sickly as its owner, turning its lank and stunted leaves with unvarying constancy towards the light, and it is a curious fact, that if you harass them, or, in other words, if you continue to change their position after they have arranged themselves for enjoying the light, so as to oblige them to do the same thing over and over again, the constant expenditure of vitality necessary to accomplish these changes wears out the plant, and prevents it proper development.

M. Dutrochet, a physiologist whose discoveries have excited a great deal of attention, has made some remarks on this subject, which I shall beg leave to quote. He seems to think that it is only in the coloured parts of plants that we find this tendency to seek the light. "Stems," says he, "are generally directed towards the light, and this is in accordance with their colour, which is usually green, while the roots have usually a tendency to avoid the light, which coincides with their want of colour. The colour of the roots is, in fact, nothing but that of the vegetable tissue, and can by no means be compared to that of the petals of some plants, which arises from the presence of a white colouring matter. Light, which is the principal but not the sole cause of the colour of stems and their organs, has no power of infusing colour into their roots, as may be easily seen by roots growing in a glass of water. Here, in spite of the influence of light, they constantly remain colourless, and this does not depend upon immersion in water, because leaves immersed in that medium are nevertheless green. Although roots in general have no tendency towards the light, yet such a disposition does become manifest, *provided the terminal shoot of a root becomes slightly green*, as occasionally happens.

"Having induced some seeds of mirabilis jalapa to germinate in damp moss, I remarked that the young roots, when about as long as the finger, were terminated by a shoot of slightly green colour. Wishing to know whether these roots would turn towards the light, I placed them in a glass vessel filled with water, having a wooden cover pierced with holes to receive the roots, and then enveloped the vessel in black cloth, leaving only a narrow vertical slit through which light could enter the interior. This slit was exposed to the rays of the sun, and a few hours after I found that all my roots had bent back their points towards the slit through which the light was introduced. The same experiment was tried with colourless roots, but no alteration in their direction was produced. From this it appears evident that colour is one of the conditions that determine the directions of vegetables and their parts towards the light, and consequently towards the sky.

"This is so true, that colourless stems are known to assume the direction of the roots. In the sagittaria sagittifolia this is particularly obvious. Shoots are produced from the axillæ of all the radical leaves which grow at the bottom of the water; these shoots have their points directed towards the sky, like those of all vegetables. The young stems which are produced by these shoots are entirely colourless, like roots, and instead of taking a direction upwards towards the sky, as coloured stems would do, they turn downwards, pointing towards the centre of the earth. These subterranean stems next take a horizontal course, and do not assume any tendency towards the sky, until the points become green."

M. Dutrochet has remarked a similar phenomenon in roots. "It is well known that the exposed stems of many plants produce roots. When green, these turn upwards, as in the pothos and cactus philanthus; when colourless, they point downwards. Hence it is to be inferred, that stems do not ascend merely because they are stems, but because they are coloured; and that roots descend not in their quality of roots, but because their parenchyma is colourless."

So far M. Dutrochet. It appears to me, however, that this argument is fallacious. The facts adduced merely prove that the parts which are attracted by light are also generally coloured, or, in other words, that colour and irritability to light generally go together. But it might as well be said that the irritability to light was the cause of colour, as that the colouring matter was the cause of irritability. These properties are both related to light; both, too, are equally useful, but there is no necessary connexion as cause and effect between them, as is evident from a fact adverted to by M. Dutrochet himself. The radicle of the parasitic misseltoe is of a paler green than the outer parts, and, instead of turning towards the light, it avoids it with so much pertinacity, that it is impossible to induce it to take such a direction, so that it seems to be repelled by the light.

This theory, however, seems to have met with a very favourable attention;—it has been adopted by Lindley and some others, and it may not be amiss to trace it further. M. Dutrochet says that "the action of light is so powerful on the leaves of plants, that not only does the upper surface of the leaf turn towards the sky, and the lower towards the earth, but that, if the position of the leaf should happen to be inverted, this disposition causes the petiole to twist round so as to enable the deranged leaf to recover its former aspect." Here, again, we have the theory that the deeper colour turns toward the sky or light. And this is so constant a law, that it will be found that if that surface of the leaf, which

* The sale of caged singing birds is very considerable in Dublin, and it is remarkable, that the greater number are bought by the room-keepers who live in the narrowest lanes and alleys of the city.

is naturally inferior, is more deeply coloured than the superior, the petiole will be twisted round by the greater affinity of the lower surface for the light, which will thus become uppermost, the leaf presenting the appearance of an inverted leaf. This may be seen in many grasses, but particularly in the zea Mays, triticum repens, and agrostis rubra. Hence it is to be concluded, that the upper surface of the leaf is not turned towards the heavens merely in consequence of its quality of being the upper surface, but because it is generally most deeply coloured."

Here it will be necessary to inquire, in the first place, whether the proper under surface of such leaves was of a deeper colour before it turned upwards. In the next place, the fallacy of this conclusion is clearly proved by a fact that Dutrochet has entirely overlooked, viz., that while rolled up in the bud, and while very young during the process of unfolding, most leaves exhibit little or no difference of colour on their surfaces. The shape of the petiole, and its mode of attachment to the stalk, would appear to be the cause which first determines the relative position of the surfaces of the leaves. At the very first moment the bud begins to expand, the central leaflets exhibit the proper directions of their upper and under surfaces, and this occurs at a time when both are equally shaded from the light. Again; according to this theory we should have the leaves of plants growing in the dark with their upper surfaces turned in every direction,—some upwards, others downwards. This, however, is not the fact. If, according to Dutrochet, it is depth of colour which determines the position of the surfaces of leaves, it would be natural to infer, that here where there is an absence of colour as well as of light, and consequently nothing to regulate the relative positions of the leaves, we should find their surfaces taking every direction indiscriminately, which is contrary to the fact, such plants being known to arrange their leaves in the same way as if they had been constantly exposed to the full glare of day.

The following observation, which occurs in Silliman's Journal, No. 13, p. 193, affords a strong proof of what I have stated. "It frequently happens in America, that clouds and rain obscure the atmosphere for several days together, and that during this time the buds of entire forests expand themselves into leaves. These leaves assume a pallid hue until the sun appears, when, within the short period of six hours of a clear sky and bright sunshine, their colour is changed to a beautiful green. One writer mentions a forest on which the sun had not shone for twenty days. The leaves during this period were expanded to their full size, *but were almost white.* One forenoon the sun began to shine in full brightness; the colour of the forest absolutely changed so fast that we could perceive its progress. By the middle of the afternoon the whole of this extensive forest, many miles in length, presented its usual summer dress." Here, according to Dutrochet's theory, previous to the appearance of the sun, many of the leaves ought to have been turned upside down.

M. Dutrochet has also endeavoured to establish the same law with respect to the petals; but here there are obvious difficulties to contend with. Thus he has not been able to account, in anything like a satisfactory manner, for such exceptions as are presented by the digitalis purpurea and fritillaria latifolia. His next observation is more interesting. The part I quote is taken from Lindley's Botany. "From the following and some other experiments, M. Dutrochet infers, that the direction of leaves to the light is not mechanically caused by the operation of an external agent, but is due to a spontaneous motion put in action by the influence of external agency. He took a leaf and cut off the petiole, the place of which was supplied by a hair hooked by one end upon the leaf, and having a piece of lead attached to its opposite extremity. They were then plunged into a vessel of water; the weight of the lead carried the leaf to the bottom of the water, where it stood erect, in consequence of its lightness inducing it to attempt to ascend. Being exposed in a window, so that the under surface was turned towards the light, no alteration in its position took place. Now, as from Bonnet's experience, it is certain that leaves immersed in water act exactly as if surrounded by air, it is to be inferred that the external influence of light is of no effect, unless aided by a spontaneous power within the vegetable, which was destroyed in this instance by the removal of the petiole. Leaves, immersed in water with their petioles and stem uninjured, under similar circumstances, turned towards the light as they would have done in the open air. The power thus supposed to exist in all probability depends on the same nervous matter which has elsewhere been shown to exist in all plants, and especially in those called *sensitive.*"

I shall conclude my quotations from M. Dutrochet's work with the following observations:—"On the other hand, many of the plants and zoophytes which inhabit the salt or fresh waters, manifest an aversion to a strong light, and seek to maintain themselves in a moderate degree of light. They rise towards the surface of the water during the morning, retire again to the depths during the mid-day glare, and again approach the surface in the evening. Many species of the confervæ, for instance the conferva amphibia and the conferva frigida, grow only during the autumn, winter, and spring, and disappear in summer, when the water is no longer in sufficient quantity to protect them from the perpendicular rays of the sun. Mosses and ferns endeavour to defend themselves from too much light by

selecting the north and north-west side of trees, hedges, or rocks. This is well exemplified by the Irish round towers, the northern and north-western surfaces of which exhibit in many cases, as at Cloyne, a luxuriant growth of cryptogamic vegetation, while the opposite parts are comparatively bare. It is well known that the Indians and backwoodsmen of North America are frequently assisted in finding their way through the forest by examining the trees, which indicate the north by means of the greater quantity of mosses, &c., which grow upon that side of the trunks. In fine, several of the algæ are only to be found among the most shady woods, or within the recesses of caverns, where they enjoy the total absence of light."

So much concerning the action of light on plants. I shall now speak of the remarkable manner in which it modifies the phenomena of animal life. Before I enter on this subject, however, I may remark, that the life of plants is affected in a very remarkable manner by external agents, and hence it is, that even trees of the same species sometimes differ very much in their texture. The hardness of the wood of trees varies very much in different situations, and this depends not only on the peculiarities of the soil and the presence or absence of a humid atmosphere, but also on the quantity of light to which the tree is exposed, and the exercise it takes during its life. It seems an odd thing to talk of the exercise of trees, but this is only an expression of the fact. In this country, but particularly on the western coasts, where the Atlantic blasts sweep roughly over the land for many months in the year, the trees have too much exercise, and are consequently somewhat stunted in their growth. Homer tells us, that the heroes of old used to cut the wood for their spears from trees growing in an exposed situation, from a conviction, and it was a just one, that the toughest wood is to be obtained from trees constantly exposed to storms. Trees which grow in thick groves, as beeches in some parts of Holland and America, may present a very fine appearance, but they are good for nothing but firewood. Speaking of these trees, the author of "A Tour through South Holland" observes,—"These trees are so close together, as to exclude every ray of the sun, as well as to impede the action of the atmosphere; and the consequence is, that when a log of beech-wood is brought out of the forest into the open air, it rives and splits in a most extraordinary manner. This is, indeed, the case with most other wood; and it explains why hedge oaks, or trees that have grown singly and been thoroughly exposed to the air, are less liable to split, and therefore preferable in ship-building to those which have grown in a wood." This also explains the preference given to the hill-grown pines of Norway over those of Canada, and to the British over the American oaks.

I have long since detailed to my class the interesting experiments of Mr. Edwards, made many years ago and now pretty generally known, in which he has shown in what a remarkable manner light modifies the development of animals. He has established the very curious fact, that if tadpoles be nourished with proper food, and supplied with water of a suitable description, but entirely deprived of light, their development becomes arrested in a very extraordinary way. They grow up to be enormous tadpoles, but never turn into frogs. This explains the peculiarities of some animals, as the Proteus angiformis, which have been looked upon as anomalies in nature.

Mr. Edwards pointed out also the curious fact, that, in France, persons who live in caves or cellars, subtracted for a great portion of their existence from the influence of light (and we have some of these wretched beings in Dublin, too), are apt to produce children wanting or deformed in the upper and lower extremities. Here we observe a singular arrest of development in the offspring of persons who spend the greater part of their time in the dark, presenting a degree of analogy with what has been brought forward respecting tadpoles reared up in a total deprivation of light. Linnæus, in his account of his tour through Lapland, enumerates constant exposure to solar light as one of the causes which render a summer journey through countries situated in high northern latitudes so peculiarly healthful and invigorating. I have often remarked that scrofula is a frequent inmate of porters' lodges in the country. They are generally entirely overshadowed by a dense foliage, which may contribute to produce disease, both by excluding light and ventilation. On this subject the following observations by my excellent and learned friend, Dr. James Clarke *, require particular attention, and ought to be made known to all country gentlemen. "Large trees, which are both an ornament and an advantage at some distance from a house, become injurious when so near as to overshadow it, or prevent the air from circulating around it and through its various apartments. The atmosphere of a building overhung by trees, or surrounded by a thick shrubbery, is in a state of constant humidity, except in the driest weather, and the health of the inmates rarely fails to suffer. The natural moisture of the country, arising from the humid state of the soil and vegetation, is greatly increased by such a mode of planting, and artificial atmosphere is thus created, which renders a situation of this kind much less healthy than the more open parts of large towns."

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* Article Tubercular Phthisis, in the *Cyclopædia of Practical Medicine.*

LECTURES

ON

MIDWIFERY & THE DISEASES OF WOMEN AND CHILDREN,

BY EDWARD RIGBY, M.D., F.L.S.,

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Delivered at St. Thomas's Hospital.

LECTURE XII.

Changes of the Uterus during Pregnancy.

GENTLEMEN,—It is of the utmost importance, that you should be thoroughly acquainted with the various changes which the uterus undergoes during the whole course of pregnancy, because upon an accurate knowledge of these phenomena many of our first principles of practice depend, and with which many important points of diagnosis are connected.

The embryo, as you are aware, developes itself in the cavity of the uterus, so that this organ, after conception, becomes remarkably changed, both as to its form, its size, and structure. In the unimpregnated state the uterus has its posterior surface rather convex, while its anterior surface is flatter, corresponding more or less to the globe of the bladder; whereas in the gravid state it is the reverse, its posterior surface is flat or somewhat concave, corresponding to the projecting convexity of the promontorium sacri and lumbar vertebræ, whereas its anterior surface, during the latter half of pregnancy especially, being in contact with the yielding anterior parietes of the abdomen, becomes strongly convex. The length of the unimpregnated uterus is about three inches, the breadth two inches, whereas, at the full term of utero-gestation, the gravid womb reaches from about the upper part of the pelvic cavity to the scrobiculus cordis.

Before we can perceive any traces of the ovum, we find the upper parts of the uterus softer and more loose, the layers, of which its parietes consist, distinctly separated from each other, the blood-vessels increased in size; its internal surface is very soft but uneven, covered with a quantity of extremely minute flocculi, which can only be distinguished by the aid of the microscope, and lined with a pulpy substance, into which the uterine vessels ramify, and which, passing over the os and cervix uteri, closes its cavity; this substance appears to consist of nothing else than an effusion of coagulable lymph from the inner surface of the uterus, it is thicker superiorly, and is there most firmly attached to the uterus; in the vicinity of the os uteri it becomes very thin and loose, or scarcely attached at all; the os and cervix uteri are moreover filled with a tough gelatinous matter, which is secreted by the numerous little glands with which this part of the uterus is provided; the structure of the cervix uteri differs considerably from that of the body and fundus, it is more or less of a glandular structure, intermixed with fibres, hence we see that it is liable to the same organic diseases which attack similar structures in other parts of the body. It is in this portion of the uterus where the cartilaginous induration of scirrhus is first observed, it is here where the ravages of carcinoma first commence.

The fibrous structure of the uterus becomes more apparent, in fact it is only under these circumstances, or in similar cases where the uterus has been distended by some anormal growth, that we are able to detect these fibres distinctly, nor can it be denied, if they are not produced *during* pregnancy, that at least they now become considerably enlarged and developed. This increase of size, however, is not from mere distension, for the gravid womb becomes also considerably increased in substance. Meckel, who has, at different times, had occasion to examine not less than twelve human gravid uteri at the full term of pregnancy, found that the uterus at this period, when emptied of its contents and stripped of its appendages, weighed at least twenty-four ounces, which, in proportion to that of a virgin uterus, is as twenty-four to one or one and a half. The weight of the unimpregnated uterus, at the time of puberty, was noticed so long ago as by Burton, in 1751, who considers that it weighs from an ounce to one and a half.

It has been questioned whether the parietes of the uterus, which are evidently not merely *distended* by pregnancy, continue thus to increase in thickness, or whether they become thinner; the result of some observations which Meckel made for this purpose, is that the thickness of the uterine parietes, at the beginning of pregnancy, is not much increased, but that in the latter months it diminishes considerably. On the other hand, the parietes of the contracted uterus after delivery, in the eighth or nine month, are not less than an inch in thickness. The spongy or cellular tissue of the uterus becomes considerably developed during pregnancy, and its porous cells increase in proportion as the uterus dilates, more especially at the fundus and the spot where the placenta is attached, where they become so large as to admit a goose quill. The internal membrane is pierced with numerous orifices, of which some are the mouths of arteries, and others communicate with the cells already mentioned; this membrane, also, during pregnancy forms those irregularly tufted rugæ, which serve to give a more intimate connexion between the uterus and placenta. In the unimpregnated uterus, and in the intervals between the menstrual periods, the little orifices, which are observable in the lining membrane of the uterus contain only a transparent lymph, which lubricates the interior of the uterus; during the appearance of the menses they contain a bloody fluid, and during pregnancy they are connected with the vessels of the chorion and placenta.

Both the veins as well as the arteries be-

come prodigiously increased in their calibre during the course of pregnancy, so that the venous trunks attain a size equal to that of the subclavian vein. (*Some of Hunter's plates of the Gravid Uterus were here shown in illustration.*) The remarkably serpentine and tortuous course which the uterine vessels are known to take in the unimpregnated state, is a beautiful provision of nature against the time when the uterus assumes that activity of function which commences with conception, and undergoes those changes in form, size, and structure, which characterise the progress of gestation. At this period, the more the uterine parietes increase in extent the straighter and less serpentine is the course of these vessels. The uterine veins in this dilated state come under the general term of *sinuses*. The blood-vessels undergo the strongest dilatation at that part of the uterus where the fœtal is immediately connected with the maternal system, or, in other words, at that point where the placenta is attached.

The *form of the uterus* also undergoes considerable changes during pregnancy; since, during the greater part of pregnancy, it is the body and fundus uteri which undergo the chief increase of bulk, the difference in point of size between this part of the uterus and the cervix is continually increasing, and in the latter months of pregnancy this becomes still more remarkable, as the cervix gradually diminishes in length. M. Leroux considers the circumstance of the lateral ligaments not preserving their relative position as the uterus increases in size to be a proof that the fundus dilates more in proportion than the other parts of the uterus. As the uterus increases the fundus of course rises, and can be felt through the distended abdominal parietes. Its anterior surface, especially in the latter months of pregnancy, lies immediately behind the anterior wall of the abdominal cavity, and pushes the small intestines upwards, backwards, and to the sides.

I have already stated, that the uterus in its unimpregnated state, when stripped of its appendages, weighs from an ounce to an ounce and a half, it is about three inches long, and not more than two in breadth; whereas at the full term of pregnancy, when emptied of its contents and divested of its appendages, it weighs not less than two pounds, and extends from somewhat below the promontory of the sacrum up to the scrobiculus cordis.

Let us now examine more minutely the changes which it undergoes during each month of pregnancy.

During the first four weeks the abdomen swells about as much as at the time of menstruation; the portio vaginalis, which in the unimpregnated state is hard and somewhat cartilaginous to the feel, becomes softer and more bulky; the transverse fissure which the os uteri forms becomes more oval.

In the second month the abdomen becomes flat, the portio vaginalis is easier to reach, although not, as the books say, because the uterus has sunk lower into the pelvis, but, as Mad^me^ La Chapelle has justly observed, because the vaginal portion is lower from the general increase of size in the fundus and body of the uterus; the edges of the os uteri lose their lip-like figure, and form a round ring, which is closed, and which in *primiparæ*, or women pregnant for the first time, continues so to the very commencement of labour. It feels like a circular depression at the extremity of the portio vaginalis.

In women who have borne several children the os uteri is always more or less uneven, and its edge frequently feels knotty from cicatrices, the result of former labours; it is generally open during the latter months of pregnancy, and thus furnishes us with the means of ascertaining, with a tolerable degree of accuracy, whether the patient be pregnant for the first time, or has already had children. An intimate acquaintance with these facts is of the utmost importance to you, gentlemen, for you may be called upon to give an opinion in cases where not only your professional reputation, but the happiness of a family, and the character of an individual, are depending on the correctness of your diagnosis. Where, however, the uterus is much relaxed by discharges of blood, by leucorrhœa, or by sexual irritation, the os uteri will be occasionally found open at an earlier period, even in primiparæ.

In the third month of pregnancy, the portio vaginalis is not so easy to reach with the finger, for the uterus now has risen above the upper aperture of the pelvis, the abdomen begins to be prominent, and to protrude slightly above the pubes.

The works on midwifery tell us that the uterus rises out of the pelvis from want of room, but this is decidedly not the case, for there is plenty of room till the fifth month, nor does it rest on the ossa ilii, for these are far enough off it. Why it rises out of the pelvis at this time I conceive may be explained in the following manner:—during the two first months of pregnancy, the fundus is prevented from rising by the weight of the small intestines which rest upon it, hence, as I before mentioned, from its increase of size, the os and cervix uteri are felt lower in the vagina than at other times; in the third month, as its bulk still continues to increase, the broad ligaments become more and more unfolded, and proportionately shorter; it pushes the small intestines upwards, and these being confined by the mesentery to the spine, and thus prevented ascending before the fundus, slip down behind the uterus, which, when freed from the superincumbent pressure, rises out of the superior aperture of the pelvis in an oblique direction upwards and forwards; the breasts at this time become stiffer, the veins are distended with blood, and the nipples prominent.

In the fourth month, the fundus uteri is

two or three fingers above the pubes, and in a thin person, after evacuation of the bladder and rectum, may be easily felt externally.

In the fifth month, the fundus is so high that it may be felt between the navel and symphysis pubis; the portio vaginalis is considerably shorter than in the previous months.

In the sixth month, it rises to the navel, and the fovea umbilici, or umbilical depression, begins to disappear; the portio vaginalis is diminished to half its usual length.

In the seventh month, the fundus rises behind the navel, the folds of which disappear, and it begins to project like an umbilical hernia; the head of the child, if presenting, is now capable of being felt like a light ball, which rises upon being touched with the finger; this is the *balotement* of the French. If you hold your finger still, after having pushed the head up, it will again descend and settle on the finger; the portio vaginalis becomes shorter, the breasts swell more, and a yellowish watery fluid, called colostrum, can be squeezed from them; we are now also able to feel the movements of the child through the abdominal parietes for the first time, and both this, as well as the being able to feel the head per vaginam, are *certain* diagnostics of pregnancy, it is therefore highly necessary, gentlemen, that you should bear them in mind.

In the eighth month, the fundus rises so high as to be between the navel and scrobiculus cordis; the portio vaginalis is barely a quarter of an inch in length.

In the ninth month it rises to the scrobiculus cordis, and at the end of the month is quite behind it; the diaphragm now is unable to descend, and inspiration can only take place by the ribs; the patient is at the height of her discomforts she is very unwieldly, her breath is short, she moves with difficulty, and is frequently low spirited and fretful.

During the last four weeks before labour *, a considerable sinking of the fundus takes place, and it inclines more forwards, respiration becomes freer, and the patient feels easier and more comfortable. On examination per vaginam the inferior segment of the uterus will be felt unusually low in the pelvis, and the os uteri quite backwards towards the second sacral vertebra. In primiparæ, during the last fourteen days, the portio vaginalis of the cervix has entirely disappeared, and merely a small circular depression marks the situation of the os uteri. "It has justly been considered as a favourable circumstance," says Dr. Dewees, "when the sinking of the fundus takes place, as it would seem to declare two important facts connected with delivery—1st, a healthy condition of the uterus itself, and, 2nd, a healthy conformation of the pelvis." I should be inclined to add, a favourable position of the child, for, in primiparæ, where the head presents, it may be frequently felt for several days before labour so low in the pelvis as to be close to its inferior aperture, which is seldom or never the case where face, nates, or shoulder, present.

When labour is over, the uterus contracts very considerably, and, in a few days after, its parietes will be found to be nearly an inch in thickness. It now gradually diminishes in size, so that, in a few weeks, it is not much larger than it was before the commencement of pregnancy, the blood-vessels contract, and, losing the peculiar loose structure, it becomes harder and more compact; nevertheless, it remains softer and often larger than in the virgin state, nor does it resume this degree of hardness until the female has attained an advanced period of life. The os uteri, which, in the latter months of pregnancy, had formed a circular opening, resumes its former shape, except that its lips, which are more or less irregular and uneven from cicatrices, the results of labour, and especially the posterior one, are thicker and longer than in the virgin state. For the first week after labour, the os uteri will be found high up, soft, and easily admitting the tip of the finger; at the end of the second week it is much lower in the pelvis, and will not permit the finger to pass. The changes which the size of the uterus undergoes during the first two or three weeks after birth, but more especially during the first forty-eight hours, are very remarkable; and it is singular that they do not appear to have excited much notice from authors upon this subject, since it is of no little importance to be familiar with these various changes, in order that we may distinguish them from anything anormal, and also as respects medical jurisprudence, since an accurate knowledge of them will materially assist us in ascertaining what length of time has elapsed since labour had taken place.

The uterus, immediately after the expulsion of the placenta, becomes contracted into a firm, hard ball, of about the size of a child's head, and, according to the works on midwifery, gradually diminishes in size from this time. This, however, is not as it occurs in nature. The state of powerful contraction, in which the uterus is felt immediately after labour, after a time gradually relaxes; its spongy texture, from which the blood had been forcibly expelled by the violent contractions of its fibres, becomes again filled with blood; the uterus swells and becomes somewhat softer and more bulky; the orifices of the vessels which open into the cavity of the uterus become again partly pervious, and emits a sanious fluid, viz.—the *lochia.* This state generally lasts for two or more days after delivery, when the vessels begin to recover their

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* The duration of pregnancy is 280 days, or ten lunar months. The above description has therefore been given according to the lunar and not calendar months, which, being of unequal length, would not make it so correct.

former calibre, and lose that degree of dilatation peculiar to the gravid state; the lochia become less and less coloured; and now, and not before, does the uterus undergo that gradual diminution of size and bulk which I have before noticed.

From among several cases in which I have carefully noted the height of the uterus at different intervals after birth of the child, I select the following:—

	At Birth.	Quarter of an Hour after.	
Anne Stolker	4 fingers below umb.	2 fings. below umb., & hard	
Eliz. Gray .	3 fingers below umb.	1 finger below umb.	In two days after even with umbilicus.
Sarah Collins	even with umb.	— —	In 1 h. a little above umb. 6 h. after 2 fingers above umbilicus.
Soph. Hubbard	3 fingers below umb.	10 min. after, 2 fings. below	In 8 h. 1 fing. below; 20 h, level; 2d day, 1 fing. above; 3d, 4 fing. below.
Sarah Reeve	4 fingers below umb.	½ an hour after, 1 fing. below	
Sarah Pierce	1 finger below umb.	— —	In 5 h. level with umb; 17 h. after, 1 fing. above.

LECTURES
ON
FORENSIC MEDICINE,
DELIVERED BY
DR. HAY GRAHAM,
At the Westminster School of Medicine.

LECTURE X.
Monsters.

GENTLEMEN,—The word monster, according to the definition given by Blackstone, means one which hath not the shape of mankind, but evidently bears the resemblance of the brute creation, such a being hath no inheritable blood, and cannot be heir to any land, although brought forth in marriage; but if it hath the human shape, notwithstanding its deformity in any part of its body, yet it may be heir.—*Blackstone*, v. 2, p. 247.

By this definition it would appear that our ancestors believed in the possibility of procreating a human mule, from the impure and unnatural connection of a woman with some other animal; hence it would have no inheritable blood, and would necessarily deviate from the human shape.

The old authors abound with accounts of every species of imaginary monsters both of land and of water, of air and of fire, such as the phœnix, the unicorn, the hippogriff, and salamander; of quadrupeds with the beaks and wings of birds; of fish resembling land animals, as the triton, and the mermaid, the monk-fish, and the bishop-fish, the sea-horse, and the sea-cow; then we have the centaur, the satyr, and the sphinx, and a long list of monstrous human births, in which half the body is that of a goat, a sheep, or a dog. We have accounts of eggs hatching serpents, and of fiery meteors in which were depicted the signs of the times, the precursors of dire events, of war, and bloodshed, of plague, pestilence, and famine.

The unbounded credulity of our ancestors, that love of the wonderful to which man is ever prone, caused them firmly to believe in all these absurdities. To man nature hath granted superior intelligence, "os homini sublime dedit;" and should any be so imperfectly developed as not to assume the human countenance, which happens in the case of acephalous monsters, such beings cannot inherit, for they are incapable of living, and die shortly after birth.

Man forms a species of himself totally distinct from all other animals, and his race will not combine with theirs; such an animal, "informe, horrendum," has no existence. But even kindred species will not perpetuate a mixed breed. The horse and the ass produce the unprolific mule; the goldfinch and the canary bird give rise to a mule equally unprolific. Thus nature wisely protects her offspring, and fixes certain bounds; were it otherwise, every species would quickly disappear, all would run into confusion, and blind chance direct the heterogeneous mass.

The physical meaning of a monster is any individual not formed according to the usual laws of organisation proper to the species to which it belongs. This aberration may take place 1st, from the union of two germs; 2nd, from an excess of parts; 3rd, from the defect or want of parts, and 4th, from the wrong position of parts.

The first is termed diplogenesis, arising from the adhesion or fusion of two or more germs, and is divided into two species. 1st. Where two individuals are joined together by any one point on the surface of their bodies, and each, in appearance at least, presents every part distinct, as in the case of the Siamese twins, with which you are familiar, also in the

interesting case of the Hungarian sisters Judith and Helen. 2nd. Where, in the union of two or three individuals, the fusion of the parts is deep-seated, and where some of the members have disappeared. Thus Fattori, in 1810, observed a fœtus in which he evidently distinguished the remains of two or three other fœtuses. It is thus we sometimes meet with three arms, or three legs, or four arms and two legs, or four legs and two arms, or otherwise two arms and three legs, and other supernumerary parts. These monstrosities frequently occur in inferior animals, both in birds and beasts; as in domestic fowls, in sheep, cows, horses, dogs, cats and others. 3rd. Two individuals may be separated in their superior parts, and united in their inferior parts, as in the case related by the celebrated George Buchanan; or 4th, two fœtuses may be separated in their inferior parts and united in their superior parts, having one head and two bodies, a case of rare occurrence.

The second species of diplogenesis, by fusion or penetration, contains two varieties. 1st. Where one of the individuals is in part destroyed, and the remaining portion protrudes beyond the body of the other individual, at whose expense it is nourished, as in the case of the Chinese monster; 2nd, where one of the fœtuses is altogether contained within the other.

The second class of monstrous births arising from an excess of parts, is called hypergenesis, and includes such as have supernumerary fingers or toes, additional ribs or vertebræ, more than thirty-two teeth, or than one papilla on each mamma, or several mammæ, two or three hearts, two duodena, three kidneys, two vaginæ, two uteri, three ears, three or five eyes, and such like.

The third class of monsters, arising from the defect or want of parts, is called agenesis, and proceeds from a cessation of growth or want of evolution in the organs of the embryo, such as acephalous or anencephalous offspring, where the head or the brain is wanting. Sometimes the heart, the liver, the kidneys, or testicles are absent; or there may be but one arm or one leg, or neither legs nor arms. I need not observe that the absence of the brain, the heart, the lungs, the liver, the œsophagus, or the stomach, is necessarily fatal to the life of the offspring. In congenital hydrocephalus the brain is imperfectly developed. Hydrorachitis, or the *spina bifida*, generally causes death to take place in a few days, yet when the tumour is small, and proper means are made use of, this defect of organisation is not incompatible with life; sometimes there is imperfection or absence of the face, accompanied with a greater or less alteration in the bones of the *cranium*, in which species of monstrosity there is generally no brain. In addition to these many others might be enumerated, as where there are only two or three fingers or toes, or only one eye, the intestinal canal incomplete, the urethra impervious, or the urethra or the vagina, terminating in the rectum, and such like.

The fourth class, or the wrong position of parts, which has been termed heterogenesis, is an organic deviation of nature, where the organs are reversed, as, for example, when the heart is to the right, or the liver to the left, or the testicles not descending into the scrotum.

M. Geoffroy St. Hilaire is inclined to the opinion that the different kinds of monstrosity arise from the faulty or vicious development of the parts, in consequence of a change taking place in the *nisus formativus*, and that unnatural adhesions between the embryo and its membranes may produce a change of situation in the organs of the fœtus, by causing a determination of blood towards those parts. During the first months of fœtal life, several organs, which afterwards incline either to the right or to the left, occupy the median line, and are placed in a perpendicular position. Thus the heart, not having yet assumed an oblique direction from right to left, is placed parallel to the axis of the body; the same observation is applicable to the stomach, and, in short, to the whole of the alimentary canal, which in the first instance is merely a simple tube without circumvolutions, extending in a straight line from the stomach to the anus, and these different inclinations, which are the consequences of an imperfect development, may continue after birth. This theory may, perhaps, explain some cases, but is certainly inapplicable to others.

Some species of mal-formation are hereditary; there are entire families in which all the individuals have six fingers. Morand makes mention of a woman who had six fingers and as many toes; her daughter had only six toes. She again had eight children, only four of whom had six toes on each foot. Osiander relates the case of a woman who was delivered of a monster with two bodies, and whose grandmother had borne a similar one.

Some parents have procreated children all affected with the same kind of monstrosity. Others, after having brought forth weak puny children, incapable of living, have given birth to others in whom one or several organs have not been developed. At other times the delivery of twins has been followed by the birth of monsters with two bodies or two heads.

Richerand observes, that if two embryos contained in the same ovum be placed back to back, and the surfaces of contact should become inflamed, their mode of union may be easily conceived. If we put the fecundated ova of a tench, or any other fish, into a small vessel, the numerous young not having sufficient space to grow, become jointed to each other, and hence will arise monstrosities in fish.

Perhaps the cases of hypergenesis, where there is an excess of parts, as an extra rib or vertebra, may arise from the undue activity of the *nisus formativus*, excess of nourishment, or peculiar determination of blood to those

parts; yet there can be no doubt that many cases of malformation, or undue growth, which might in the first instance have been accidental, either from the effects of disease or from the undue energy of the vital action in rudimental organisation, subsequently become hereditary, as is frequently observed in inferior animals.

It appears to me that Richerand's simple theory satisfactorily accounts for all cases of diplogenesis, which take place from the fusion, adhesion, or re-union of germs. The deficiency of the amniotic fluid, the want of space, or whatever other cause which might bring them into contact, would naturally produce such an effect. The union being once produced, either to a greater or less extent, would necessarily cause some corresponding change in the circulation, the blood would be differently distributed, and the parts differently nourished; thus, whilst some would be largely developed, others would not be developed at all, or would wither and perish, according to the endless variety of circumstances which might accompany them, and thus give rise to every variety of double birth.

This sufficiently explains the mode of union in the Siamese twins, also of Judith and Helen, which is related by Buffon: these sisters, unlike the Siamese twins, were united by the sacrum. The following is their history:— "These young women were entirely separated from each other except the anus, which was common to both, from which circumstance they simultaneously experienced the same desire of relieving nature; but in other respects, as in size, in temper, and in health, they differed, and, unfortunately, frequently quarrelled with each other. When in their 22nd year, Judith fell ill of a fever, became lethargic, and died. Poor Helen was obliged to submit to her unhappy destiny; three minutes previous to the death of Judith she suddenly fell *in articulo mortis*, and expired nearly at the same moment. These twin sisters were born at a place called Tzoni, in Hungary, on the 16th of October, 1701, and died in a convent at St. Petersburg, on the 23rd of Feb., 1723."

The second or deeper seated species of diplogenesis admits of two varieties; 1st, where one of the individuals is in part destroyed, and the remaining portion protrudes beyond the body of the other individual, at whose expense it is nourished. In the Philosophical Transactions, there is a very interesting account of a person living in China, with a male child adhering to his breast. This individual was sixteen years old when the account was written, and was able to do the work of a husbandman. Ambrose Paré gives a drawing of a similar case, which is thus related. "In the year 1530 there was a man to be seen at Paris, out of whose belly another, perfect in all his members except head, hanged forth as if he had been grafted there. The man was forty years old, and carried the other implanted or growing out of him in his arms, with such admiration to the beholders, that many went to see him." The 2nd variety is where one of the fœtuses is altogether contained within the other, as in the case of the French boy, who always complained, from the time he could first speak, of a pain in his left side, which was considerably enlarged; when he was thirteen years old he was suddenly seized with a fever; his tumour became voluminous and very painful; shortly afterwards he passed by stool a quantity of fœtid puriform matter, and laboured under many of the symptoms of phthisis pulmonalis. He then passed a ball of hair, and at the end of six weeks died in the last stage of a consumption. On opening the body, it was discovered that the tumour was contained in a sac, occupying the transverse portion of the meso-colon. The mass which filled the sac consisted of a brain, a medulla spinalis, nerves, muscles, a skeleton, and an umbilical cord, consisting of a vein and an artery; but the organs of generation, of digestion, of the secretion of urine, and of respiration, were wanting. Mr. Highmore relates the case of a youth, aged sixteen, who died in 1814, after having experienced the most severe pains in the abdomen. The hypochondria, the epigastric and umbilical regions, were occupied by a tumour of irregular form, in which was discovered an imperfect fœtus. There are many other similar cases on record.

Belonging to this class is the case related by Sir Everard Home of a male child, born in Bengal, in 1793, with a well formed body, but it had a second head, placed in an inverted position on the top of the proper one. It was equally perfect, and at the age of six months both were naturally covered with black hair. The child lived four years, and its death was owing to the bite of a cobra di capello. On dissection, no bone was found separating the two brains. The skulls are preserved in the Hunterian Museum.

Ambrose Paré makes mention of a monster born in Germany, with a large head and face growing out of his belly. It came to man's age, and his lower, and as it were, inserted head was nourished as much as his true and upper head.

Reviews.

An Essay on the Deaf and Dumb, showing the necessity of Medical Treatment in early Infancy; with Observations on Congenital Deafness. By J. H. Curtis, Esq. Second Edit., 8vo. pp. 211. Longman: 1834.

Mr. Curtis is so well known to the profession and the British public as an author on aural and ophthalmic surgery, that we shall allow a notice of the preface of this work to suffice, and this under the form of one or two quotations. Mr. Curtis proposed to the Governors of the London Deaf and Dumb Asylum, in

the year 1817, the addition of an aurist to their medical staff, on the presumption, that many cases admitted into the institution, if carefully examined, might be found curable. "I adopted this measure at that time, from a firm persuasion that there exist numerous cases in which there is no malformation of the organ of hearing, but merely that state of its function which admits of remedy, and, consequently, that many children, so circumstanced, would, under proper treatment, obtain the faculty of speech. This opinion has been fully confirmed by subsequent extensive experience." M. Itard, of Paris, in a Memoir to the Minister of the Interior, confirms the opinion of Mr. Curtis. He believes "that absolute deafness is comparatively rare, and that not more than one-fifth of the cases of deafness and dumbness, which have come before him, have presented a state of total deprivation of the sense of hearing." The relative value of the senses is a subject upon which much speculation and ingenuity have been bestowed. Diversity of opinion still prevails on the question, which of the senses ministers to the being his greatest enjoyments, and affords him the most numerous intellectual resources? Mr. Curtis places hearing the first,—we give priority to vision. We agree with the author, that blindness, where all is blank and void, would be preferable to a deprivation both of hearing and speech. The latter condition must, indeed, be a lamentable one; and he who can remedy it deserves the approbation of his fellow-creatures. Mr. Curtis has long been an industrious labourer in the vineyard, and without thinking he has made the most of his cases, or embodied all the results of his experience in this work, we, nevertheless, recommend it to that attentive perusal which it deserves.

Substance of a Clinical Lecture on a Case of Hydrophobia, delivered at the Charing-Cross Hospital, November 24th, 1834, &c. &c. By T. J. Pettigrew, F.R.S., F.S.A., F.L.S., and Surgeon to the Hospital. Longman, 1834. Pp. 35. Stitched.

Our readers are already acquainted with the principal facts connected with the case which forms the subject of the present lecture, both through the medium of our hospital reports, and also by Dr. Weatherhead's highly interesting communication. In our report, the cause assigned was the scratch of a kitten, but it appears, from information obtained since, that the boy was actually bitten by a dog, and that the scars seen in the hand were the marks of the bite and not of the scratch. In this case, and in the one immediately preceding, the internal administration of tobacco was had recourse to with apparently but transient advantage.

Mr. Pettigrew gives his reason for employing it as follows:—"I must now say a few words as to the mode of treatment adopted in the cases of Grindley and Porter, as some misconception has gone abroad on the matter. I have been represented as holding out tobacco as a remedy for hydrophobia. I have done no such thing; neither am I very sanguine as to its curative powers; but I do not think that it has yet had a fair trial. Twenty-six years since my excellent friend, Dr. Clutterbuck, had a case of hydrophobia in a delicate child, to whom, in an advanced stage of the disease, an injection of tobacco was administered, with a view of allaying the violent spasms operating on the muscular system. It was followed by a tranquillity extending so far as to procure sleep for three hours; the practice was not persisted in, and the child died. This case made a strong impression on my mind, and I fully determined to employ this remedial agent whenever an opportunity should offer." Neither case afforded any chance for the tobacco to prove of advantage; the disease was too far advanced. Mr. Pettigrew proceeds to state his object in administering this powerful narcotic; it was to produce "a prostration of strength without an abstraction of the vital fluid, and to subdue the violence of the spasm. * * * * It has in all cases produced tranquillity and alleviation of the symptoms; and that which palliates is likely to arrest the progress of a disease."

A curious fact is related by Mr. Pettigrew, with which we shall conclude our notice, remarking that, if clinical lectures are given on other cases as well as hydrophobia, on those most commonly met with, as on those which are, comparatively speaking, rare, the students will be the gainers. The information generally obtained in a course on medicine or surgery may be procured by the studious and diligent perusal of systematic works, but the book of nature, the only legitimate source of knowledge, is written in characters which, although clear to the eye of experience, are hieroglyphics to the tyro, and require the assistance of a teacher to render them intelligible. In other words, walking the hospital will never avail the pupil unless the cases are explained and commented on at the bed-side. The lecture under notice is well worthy of perusal.

We promised to give a concluding extract,—*le voici.* "It is desirable that excision should never be neglected, and the sooner it is performed the better; though I believe that security will be afforded by the removal of the bitten parts at any period between the infliction of the bite, and the occurrence of the first symptoms of hydrophobia. A case in point upon this matter, related to me by my friend Mr. Saumarez, who formerly practised very extensively in the neighbourhood of London, is of exceeding interest and importance, and may serve to give consolation to many labouring under an apprehension as to this disease. A grandmother, mother, and three children, were lying in bed, covered

with but a small quantity of clothing, when a strange dog entered the bed-room, and wounded the whole of them. The animal escaped, and no attention was paid to the circumstance, until the grandmother, at about five weeks from the bite, became hydrophobic, and died. Mr. Saumarez made inquiry into the case, and, learning the particulars of the injury to the mother and three children, recommended that the parts at which the bites had been made should be excised; to this the sufferers readily assented, and the marks were sufficiently obvious to direct Mr. Saumarez in his operations. They all escaped the disease, and at the time Mr. Saumarez communicated to me this interesting case, two years had elapsed, and they were all living." It is of course more advisable to excise the bitten part immediately; it will be more easy then to ascertain that the whole of the part injured is removed; by holding it up to the light a crevice may be perceived should a portion be left behind, but where the wound has been allowed to cicatrise, it is impossible to apply this test; the only plan that can then be adopted will be to cut out rather a large portion; less injury would accrue from taking too much than too little.

The Cyclopædia of Practical Medicine.
Part XXIV.

No medical work has ever been published in the English language perhaps, that has contained so much really valuable information as the "Cyclopædia of Practical Medicine," nor has ever one, unquestionably, been produced, that comprised so many talented writers in its production. Faults it has; but what human production was ever faultless. Nevertheless, despite its deficiences, we wish heartily that equal talent might be concentrated on other and every branch of medical science. Such a co-union of men, renowned for their great intellectual capacities, their ingenuity, and their extensive experience in general, it can scarcely be supposed that a work of sterling merit should not be issued to the world under their auspices. We say not this under the feeling of fawning sycophancy; for independent of the writers, and unknown to the proprietors of the work, we can be influenced only by the principle of common justice, which it is our duty, bounden duty, to mete out. We naturally, as other men do, or ought to do, "judge of the tree by its fruit;" but, in addition, we may occasionally be permitted to reverse the proposition, and judge of the fruit by its tree. The great majority of the articles embodied in this work are written by men occupying the first rank in the profession;—the position is granted; it becomes then a question, whether or not it would have been more desirable, instead of writing a series of monographs on disease, to have compiled, from the best authors, the leading and received opinions on each topic. It is, we believe, generally conceded, that a monographic account of any particular disease comprises all the valued opinions on the subject, the results of the experience of the writer, with comments on the views of his cotemporaries and his predecessors. Such a system has been adopted in the work before us, and we think it the most preferable that could have been devised.

The "Cyclopædia" has now arrived at the twenty-fourth number. Our attention has been attracted towards the present part, chiefly on account of three very valuable, and popular, and interesting articles which it contains, viz. on the "History of Medicine (concluded), by Dr. Alison," on "Mineral Waters, by Dr. T. Thompson," and on "Worms, by Dr. Joy." It is probable that a review of each article, to make it advantageous to our readers, as well as to do justice to the respective authors, will not be compressed into one number.

The first subject we meet with is on the history of medicine from the commencement of the present century, a period of years limited in number, yet one fraught with the greatest interest. The author takes a cursory glance over the whole domain of medicine, and, like the "Maiden of the Mist," he bounds from rock to rock with the utmost celerity, but invariably leaves an impression where his footsteps have trodden. He discusses with candour and erudition the "Importance of Comparative Anatomy and Physiology, as extending the foundations of Medical Science; Misapprehensions involved in the general principles of Hoffmann and Cullen; Improvements recently effected in the Physiology of the Essential Conditions of Life in the higher animals; in the Physiology of the Nervous System; in other departments of Physiology; Vital Changes in the Fluids, as well as in the Solids, must be held to be ultimate facts in Physiology and Pathology."

Collateral sciences he regards as of utility, "chiefly as an exercise of the understanding." Comparative anatomy and physiology he justly esteems the only secure foundation to the arrival at a knowledge of disease. The names of Hunter, Blumenbach, and Cuvier, are adduced as illustrations. Dr. Alison might have adduced other celebrated individuals; he might have told how Baillie, from his thorough knowledge of anatomy and physiology, was enabled to arrive with more celerity and greater precision at the diagnosis of disease, and consequently was more capable of administering proper remedial measures.

The imaginary being, *Vis Medicatrix Naturæ*, is disposed of in a very appropriate manner. It is regarded as a power, the agency of which we know little, and the essence of which we know nothing, though the phrase, like the term *sympathy*, serves our purpose; by expressing nothing we mean much; the paradox is admissible. We have next a reference made to the causes of death, in which the notions of Bichat are, we think, too hastily

censured, and those of Drs. Williams and Key too hastily conceded to. Bichat, we believe, was occasionally in error, but frequently correct. Each failed, we imagine, in offering a correct elucidation of the question, from their omitting some of the links in the chain of vital actions. The heart cannot act without nervous excitation; the nerves cannot cause the *contractile*, the *exciting*, *moving* force, unless they receive a due supply of blood,—nay, unless they are supplied with the blood as well in a certain quantity as of a proper quality, their actions become languid, vague, and irregular. The nervous system acts upon the muscular fibres and incites them to motion; but the nervous system must be in a state of integrity to be capable of performing its functions efficiently.

On the subject of secretion and excretion some very acute remarks are made. The author announces the fact, that all the elements, even the proximate elements, found in the secretory fluids, can be detected in the blood; so that secretion, therefore, is not the operation by which these substances are amalgamated or formed, but the simple process of separating and removing them from the sanguineous fluid. He does not explain, or attempt to explain,—nor has it ever been explained—why the kidneys separate urea from the blood, and the liver picromel.

On the process of absorption we quote the author's digest of the opinions of some of the most celebrated physiologists, Continental as well as British.

"That although the set of vessels described for a century past by the name of absorbents are really destined for the office of absorption, and their structure in various ways is peculiarly adapted to it, yet it is not through them, or through any one set of vessels exclusively, that the absorption of extra-vascular substances into the circulating mass is effected; that a function precisely similar is executed in many living beings without any set of vessels being appropriated to it; and that the absorption of extra-vascular matters in the higher animals must be ascribed, therefore, in the last result, to peculiar relations subsisting, in the living state, between those matters and the circulating blood, rather than to the peculiar nature or forms of the vessels which are the organs of absorption; and, accordingly, that the degree of absorption is very much influenced by two circumstances in the condition of the circulation of the part where any such extraneous matters may be, namely, by the fulness of the vessels, and by the rapidity of the current at that part; being always diminished when the vessels are much distended, and likewise when the flow along these vessels is much retarded or suspended, as by the removal of atmospheric pressure from any portion of the surface of the body."

FOREIGN MEDICAL LITERATURE.

Analysis of M. Civiale's Memoir on Lithotrity.

Read at the Academy of Sciences, Oct. 1834.

In this paper M. Civiale gave a concise description of the different instruments invented for lithotrity, and pointed out the different inconveniences of each. Before entering into a comparison of the two operations, he pointed out the occasional necessity of each, and also entered into a lengthy detail on the use of the different instruments invented.

1st. In cases of small calculi, and where the stone is large and easily broken; or, if hard and reduced to fragments, he states the three-branched instrument is always attended by the most satisfactory results. A number of cases he enumerated, in which the operation lasted about five minutes, and one sitting sufficed for the cure.

2nd. When the calculus is large and very hard the pressure alone is not sufficient. In such a case, he states it is necessary to perforate the stone before it can be reduced to powder. The operation is then more complicated, as it requires many sittings before the stone can be destroyed. Nevertheless, he appears to prefer the three-branched instrument, for he states it is less painful, and its repetitions are much less than are generally supposed. Out of 244 cases operated on by M. Civiale, the average is about four sittings, and each of them of very short duration.

In every case the perforating instrument was only employed as a preliminary means of facilitating the crushing of the stone.

3rd. The perforating instrument, he adds, should be exclusively reserved for those cases in which the stone is large and hard. The treatment in such cases is long and painful, and, occasionally, a number of sittings are necessary to complete the destruction of the stone. The author, however, gives the preference to the system of percussion, and states, in every case for the future, he shall use and modify it as occasion may require.

After having spoken of the application of each proceeding, he specified the cases in which each ought to be preferred. The following are his views of the manœuvres necessary for either of the instruments.

"The three-branched litholobe grasps the stone; it cannot escape either by the lateral openings, as they are diminished according as the instrument is closed, or by the anterior opening, as it is retained by the hooks. Thus, in every case when the stone is of small size it is easily seized and firmly fixed. This result is owing to the mechanism of the instrument, and the operator by it may judge of the precise position in which he has grasped the stone.

"When, on the contrary, we use an instrument with two blades, there is always a

certain difficulty in ascertaining the position of the calculus relative to the instrument. Consequently in closing the two blades, particularly if the stone is not flat, and the two branches are not applied exactly in the centre of it, the stone escapes. This part of the operation, then, is all chance, and there is no certain means of seizing the stone in the centre.

"Independently of this risk, the patient is put to much suffering, the exclusive result of which is owing to the mechanism of this new instrument. Every time the operator wishes to know whether the stone is in the instrument, he is obliged to approach the blades; if it is not in them, or if it escapes, he is obliged to open them again, and so he continues opening and shutting the apparatus. These different movements cause acute, and sometimes unbearable pains; whereas by making use of the ordinary apparatus, the instrument is not closed, until by means of the *lithotriteur* the stone is ascertained to be in the instrument. This important point does not appear to me to have sufficiently fixed the attention of surgeons; it is, nevertheless, remarkable that it has not, from the slight degree of pain it produces, and the precision with which one may by it perform the operation.

"The means that I employ for breaking the stone in cases of small calculi acts momentarily, without concussion, without any movement of the apparatus, without, in fact, changing or adding anything; the hand of the surgeon is applied against the *cuivrot*, and taking a point of support on the *rondelle* of the *lithotabe*, suffices to break the stone between the head of the *lithotriteur*, and the hooks of the branches. By this means, the surgeon can ascertain with precision the necessary force.

"By the new proceeding, on the contrary, the pressure and percussion are executed by a brutal force, which it is almost impossible to graduate. The employment of this requires different movements and some additions, which complicates the manœuvre, and renders it uncertain."

Afterwards he spoke of the inutility of the three-branched instrument in cases of hard and large stones, and in such cases he gave the preference to the employment of the perforator.

Such are the judicious reflections suggested by M. Civiale on a comparative examination of the two methods which are disputed at the present day. His extensive experience has enabled him to appreciate the value of each.

Traité Complet de l'Art des Accouchmens, ou Tocologie Théorique et Pratique, avec un Abrégé des Maladies qui compliquent la Grossesse, le Travail, et les Couches, et de Celles qui affectent les Enfans nouveau nés. Accompagné de seize Planches Gravées. Par ALF. VELPEAU, Professeur de Clinique Chirurgicale à la Faculté de Médecine de Paris, Chirurgien de l'Hôpital de la Pitié, &c. Deuxième Edition, Corigée et Augmentée, en Deux Gros Tomes. Londres et Paris, Baillière. 1835.

A Complete Treatise on Midwifery, or Theoretical and Practical Tocology, with an Abstract of the Diseases of Pregnancy, Parturition, and the Puerperal State, and of those incidental to New Born Children. With Sixteen Plates. By ALF. VELPEAU, Professor of Clinical Surgery to the Faculty of Medicine, Paris, &c. &c. Second Edition, Corrected and Enlarged, in Two Large Volumes. London and Paris, Baillière. 1835.

Some few years ago M. Velpeau published the First Edition of the work before us in two small volumes, containing, in fact, merely an abstract of his lectures on the subject which it embraces. It was then intended solely for the use of students. Those who possess the first edition will scarcely recognise the work in its new and enlarged form, it is rather a new book than the second edition of an old one, and will now prove of advantage not only to students, but to experienced practitioners, and even to professors of the art. Many chapters have been entirely rewritten, more especially those on the pelvis, with relation to the axes, malformations, &c., and also the congenital organic alterations of the genital organs, with the operations that may be necessary. The articles on softening of the symphysis during pregnancy, extra-uterine fœtation, with its mechanism, symptoms, treatment, and termination; false conceptions, twin cases, superfœtation, and abortion have been recast, and a valuable and extended chapter on auscultation added. The parts of the work, in which menstruation, reproduction, and *le toucher* are treated of, have received numerous additions, so as to enable the author to bring the work before the medical public with all the improvements that have been made. Under the head of *le toucher* M. Velpeau insists very strongly on the advantage derivable from an examination *per anum*, and through the abdominal parietes in many cases.

While treating on ovology, we observe the author has not made mention of M. Bischoff's work, nor has he made much use of the production of Dr. Granville, which, in his preface, he seems to regret, not "on account of its real value, but because of the impression it seems to have made in England." Rather a sharp critique from a brother obstetrician, as M. Velpeau calls himself in imitation of Dr. Blundell.

The science of midwifery, if we may judge from our author's preface, appear to be as much decried in France as in England by certain individuals, who are unacquainted with its value.

"Tocology is a useless science according to some persons, for, out of a hundred cases

there will be scarcely one which will require assistance. M. Leroy repeated constantly that the whole science might be written on the back of a playing card (M. Velpeau has occupied two large volumes, of 600 pages each, in its exposition, and has deemed it necessary to add sixteen plates to assist in its illustration). But without saying with Dionis, that the accoucheur is really indispensable in eight cases out of ten, or even in one out of seventeen, or thirty, or forty, or sixty, as is stated in many of our modern works, it may be remarked, that the assistance of art is required during the process of labour more frequently than Courtin states. Besides the rarity of its application ought never to be a motive for denying the utility of obstetric resources. The assertion of Leroy, being mere fanfaronade, cannot be raised as an objection. It is probably owing to the impossibility which this author experienced of writing a passable work, after having announced or commenced so many.

Roussel and many others have drawn attention to what passes in uncivilised countries. According to Roussel, there is no occasion for accoucheurs or midwives. If we are to believe Th. Bartholin, the Americans do not take any precautions previous to labour. Crantz says the same thing occurs among the inhabitants of Greenland. It is the same with the Abyssinians, according to Pitavel, and with the African tribes which were visited by Winterbottom. If the Abbé Prevost is not in error, the women of the Ostiacks never interrupt their manual occupations or their travels, on account of the supervention of labour. Long seems to have witnessed the same custom in India. Chardin says that the science of obstetricy does not exist in Persia or China, but what do such tales prove? How are we, in fact, to know what savage nations, who are so anxious to conceal from us even their most common customs, do under such circumstances? How often have travellers been mystified by men who are so little inclined to place confidence, and who are so well disposed to deceive? Besides if they have no accoucheurs (so called) in a state of nature, neither have they physicians. * * * And, after all, to make this argument at all available, it would be necessary to prove that in those countries parturition causes less serious consequences than among us, and hitherto this has not been effected."

We may remark, ere we close our present notice, that M. Velpeau seems to have been bitten by one of the writers from a sister country; in other words, he appears to be labouring under *onomamania*, or a desire of giving long-winded, jaw-breaking names to the most simple things. Those, who cannot distinguish themselves in any other manner from the great mass of mankind, are excusable in the attempt to exhibit their erudition, and the vast extent of learning they possess, but for a man whose reputation is well founded, thus to show himself, is rather too bad. There may be quackery even in standing sponsor to science.

LONDON MEDICAL SOCIETY.

Monday, December 15th, 1834.

W. Kingdon, Esq., in the Chair.

Dr. Whiting narrated a case to which he had been lately called. The patient was a lady, labouring under intense pain in the integuments of the thorax, on either side, and also on the inside of the arm. The symptoms, besides these which most attracted the Doctor's attention, were those of acute bronchitis, with a very rapid pulse, and great disorder of the heart's action. Under these circumstances, fearful of bleeding, opiates were prescribed. At the next visit the husband met him with a smiling countenance, and communicated the intelligence that his wife was very much improved; but, on entering the room, the fallacy of this opinion was at once perceived; the external pain was removed, but the inflammation of the bronchiæ had extended itself to the parenchymatous structure of the lungs, both of which were affected, as evidenced by the stethoscope, so that there was no portion by which the process of respiration might be carried on. The inordinate action of the heart continued. The patient died in a few hours. The body was not opened.

Dr. Whiting, from this and some other cases he had seen, was inclined to consider that a new epidemic was springing up among us. The cause of death he considered to be the impediment offered to the due performance of the vital functions of respiration and circulation.

Considerable difference of opinion was manifested as to the nature of the complaint.

Dr. Clutterbuck considered that the principal symptoms, namely the inordinate actions of the heart and the integumental pain, might be referred to inflammation of the cerebral mass, which might occur without disturbance of the intellectual functions, and without pain in the head, or local uneasiness.

Mr. Dendy and Mr. Clifton were of opinion that the case was rather one of rheumatism, with metastasis to the heart.

In the course of the evening several anomalous cases were narrated, as occurring at the present time, exhibiting more or less of a neuralgic character, removable by opium and opiates. Before the discussion closed Dr. Whiting promised to endeavour to obtain an autopsy of the case, and it was understood, should his efforts be successful, that it would be brought forward again on the 22nd instant, after which the Society would adjourn for the holidays.

A point of considerable importance was elicited this evening by the discussion, viz. that, if where fatal cases are narrated, the autopsic appearances are not detailed with the history of the case, a great field for debate is laid open, as to the nature of those appearances, which would be otherwise closed.

THE

London Medical and Surgical Journal.

Saturday, December 20, 1834.

PARLIAMENTARY EVIDENCE.

Some of our contemporaries are in "horrid dread" of any interruption to the progress of that great cause, Medical Reform. We can assure our readers, that we indulge not in such fearful forebodings. No changes in the Legislature of this country can ever prevent us from obtaining those privileges which, as civilised and intellectual beings, we have a right to demand. Mutations may take place in the Government of Britain, but Englishmen will be free. They will not be trampled upon like worms, or lashed with a whip like slaves. Whether a Tory, a Whig, or a Radical holds the reins of Government during the ensuing Parliamentary Session, we do not hesitate to express our firmest conviction, that great and beneficial changes will accrue to the Medical Profession; for let it be remembered, even but for a moment, that ours is a science, so ennobled by the benefits it confers on mankind, that the veriest despot would shrink from polluting his hands in any act that would in the slightest degree derogate from our honour, deprive us of our inestimable rights, or retain from us those advantages for which almost the whole of us so ardently pant. Monopoly may erect its baneful influence in general politics, but in the Medical Profession it could not long endure. What have we to fear? Nothing but our own timidity, or apathy, or, on the contrary, recklessness, for there is a *modus in rebus*, which it behoves us especially to observe. Not to overstep the bounds of prudence in our actions, or those of possibility in the tempest of our imaginations, the honest and judicious Reformers have but to continue their long and unremitted exertions, and they will and must achieve the victories for which they have so long contended.

The "One Faculty System" would, we fully believe, be preferable, and be more satisfactory to the Profession at large, than the "Tripartite," under its existing regulations. But we would not advise, we would not, moreover, wish, that so potential a revision should be made at once. Whatever changes do occur, let them be based on good principles, on the principle of justice, due from man to man, but, above all, let them be done well, and matured with judgment. Do not let us pass from Scylla to Charybdis, rather let us take those abhorrent half measures than be greeted by our enemies with the cynical inquiry, "Are you not now satisfied?" when we are at the time chagrined at the situation we have been so ardently toiling to obtain, and which we have voluntarily imposed ourselves. That would be *wormwood;* but we do not anticipate such a state of things, we have better hopes in prospective occurrences. The evidence, delivered before the Parliamentary Committee, has afforded us much amusement as well as much interest. Recent and pressing topics have commanded our notice, but we recur again to that evidence with manifold satisfaction. We concluded our last article on the Medical Evidence with a letter, dictated by Dr. Billing, to his brethren, the Fellows of the College of Physicians, in which he urges them, in the name of justice, to retrieve their past conduct, by expunging, eradicating, those flagrant abuses, which regulate many parts of its government. That letter, it must be remembered, was not received in good terms, or the writer in good fellowship on the ensuing session,

but it caused a vote of censure to be *proposed* on him (not passed, mark!) for his presumption.

The Duke of Wellington, it is said, in regard to general politics, affirmed, "that no Reform was necessary." Sir Henry Halford, in his evidence before the Medical Committee, would have affirmed the same in reference to the profession, if he had dared; but he knew that evidence, and arguments the most irrefragable, could be adduced to prove the contrary, so that he—even he—made a virtue of necessity, and admitted, that (though in a very limited sense) some changes *might* be beneficial, more especially as the majority of the members of the profession imperatively demanded those changes. Like a maiden, beyond the meridian of life, he carefully covered the wrinkles with paint, but he could not conceal them altogether. Not one physician, examined before the Committee of the House, who was not a protegé, or friend, of Sir Henry's, did not express, in the most firm, in the most unqualified, and, in some instances, the most indignant terms, their abhorrence of the many abuses in the College. It is not, *primâ facie*, very possible, that a law, which was enacted during the reign of the voluptuous Henry VIII., should be in force in the nineteenth century,—in the days of liberty as they are emphatically termed,—that it should regulate men possessing different feelings to what, it must be fairly inferred, were entertained at that period. We have no disposition to magnify the abuses in the various medical corporate bodies, for no institution, we are aware, can be immaculate; but the real obnoxious regulations, that are exhibited and banefully felt, we ever have inveighed and ever shall inveigh against, in disregard of the malevolence of the administrators of them, or the applause of those who coincide with us in sentiment.

Dr. Burrows stated, in his examination for the degree at Cambridge, "that knowledge of that kind which is not practical can be easily crammed in from books and drawings; whereas the knowledge that is most useful is but obtained in hospitals and dissecting-rooms." This is well known; hence the necessity for the College of Surgeons doing what they are, viz.—placing before the student, not the recent subject, but a fair though imperfect substitute—dried preparations, viz.—bones, ligamentous arterial preparations, &c., which, if the student cannot describe, it is a fair presumption that he does not know them. After undergoing the general examination, in which nothing more was elicited than what we have detailed was given by others, he is asked—"Is there anything else you wish to state to the Committee? —I wish to state upon this occasion, that I am one of those Fellows who, ever since my admission into the College of Physicians, have been extremely anxious that a reform should take place. I feel that, as the College of Physicians is now constituted, it is neither capable of protecting the public from improper persons practising, nor is it capable of protecting those who are admitted into the College in their rights; and then I consider it is established upon far too exclusive principles, not admitting very able men from other places than from the two English Universities."

Dr. Clendinning, Fellow of the College, graduated in Dublin, took an *ad eundem* degree at Oxford. For his degree underwent no examination, no certificates of attendance on lectures were required. Was "introduced to the Professor with a certificate as a Graduate in Medicine," which he regarded as suffi-

cient. "Was any certificate of your moral character and habits required by the Professor of Physic at Oxford previous to your passing?—None whatever. Did you keep an act in physic?—Yes. Was that a mere form?—I think it may be considered a mere form. Did you read a Latin thesis?—Yes. Were you examined by the Professor upon the subject of the thesis?—The Professor was not present? Who was present?—The gentleman beadle. Did he examine you in physic?—He was the only officer of the University present. It was a mere ceremony, was it not considered so?—Yes. Was the thesis written especially for that occasion?—I suppose I ought to state that I did not write the thesis: it was written for me and produced, and I read it, and the counterpart was read by the beadle." These astounding statements surpass all that we have yet met with in the evidence. They prove the position indisputably, the position which, however, few are at the present bold enough to deny, that the Universities, instead of being what they should be—seats of learning and science, are clogs certainly upon the medical student. The Oxford Professors neither demanded of Dr. Clendinning a testimonial of moral character, nor did he undergo any examination, unless we may interpret his last answer, that the "gentleman beadle" was his examiner.

HOSPITAL ATTENDANCE.

The statement has been made and reiterated again and again in this Journal, that disease cannot be studied in the lecture-room; there, principles may be learned which may serve as guides, but it is only at the bed-side of the sick, and especially in the wards of an hospital, that a knowledge of disease can be properly acquired. But the wards of hospitals are not made so available for this purpose as they might, and as they ought to be. The medical officers of these institutions receive large sums of money from the pupils, for the ostensible purpose of imparting to them a corresponding quantum of instruction; and, if that instruction be not afforded, the teachers assuredly forfeit their integrity. It is a matter—has long been so—of mercantile speculation on the part of the teachers, or should-be teachers. Such culpable negligence has long been committed, but we congratulate the students on the approach of a new era; the subject has been brought before the Parliamentary Committee, and it will be corrected. There should be in every hospital in this metropolis a resident physician, to accompany the pupils round the wards, to visit with them daily every medical case, and to occupy a sufficiency of time in the investigation of each, that the pupils might properly understand its nature. And we would suggest, if it were practicable, and it were easy to make it so, that, after visiting each ward, the physician should point out to the pupils the name of each disease, the diagnosis, the marks which characterise it, and explain to them the best mode of treatment to be adopted, the reasons why certain agents should be prescribed, and the effects which they are expected to produce; and, lastly, give the grounds on which a prognosis, favourable or not, may be deduced. The same system we would have applied to the surgical department. Pupils would thus be taught how to investigate, to treat, and to comprehend the characters of disease. We fully concede to the following remarks of an eloquent writer, but we would ask him the plain question,—Why a more efficient mode of teaching disease in the hospitals is not adopted? He must

be well aware of its palpable inefficiency. He who would organise such a system as we suggest, would confer a boon on the rising generation of pupils, and elevate himself in the estimation of the public and the profession. We have heretofore suggested that each pupil should have under his own care a certain number of cases; but we would have him also under the entire control of the "House Physician," or the "House Surgeon," and the latter *sub judice* of the regular officers.

"Of all the parts of a *practical* education the most essential is to witness disease and to see its treatment; and the place for this study is the wards of hospitals. The most uninformed person, who should daily see a physician prescribe for the sick, would pick up the knowledge how to apply remedies judiciously in very simple cases. The student, who is only educated by lectures, cannot prescribe in one, however the knowledge he possesses may qualify him upon commencing clinical attendance, to seize with rapidity, and promptly to comprehend, the features of disease. All the time which you can spare from your lectures should be given to hospital attendance."—*Professor Mayo's Introductory Lecture.*

ANATOMY BILL.

We have made it our business, during the past week, to ascertain by personal inspection the actual state of the various dissecting rooms in London. In not one of them, even of the smallest, did we see fewer than two subjects on the tables, and in some of the schools, where the students are numerous, we observed more than half a dozen. Thus, at any rate, there is *materiel* for the teachers to continue their lectures. Formerly, under the old system, this was not always the case; the lecturers were frequently obliged to discontinue their demonstrations, or to demonstrate from pickled structures. The Bill will ultimately prove efficient, and will, we have good reason to infer, be amended, during next Session of Parliament, by the insertion of a clause, enabling the schools to demand all unclaimed bodies without restriction.

CORONER'S INQUEST AT HAMPSTEAD.

A verdict of wilful murder has been given by a jury within the last week against Edward and Fellecia Chabassier, without coming to the least conclusion how the child had been murdered. It appears that the child was buried at Hampstead by the mother and a friend of hers, Mary Ann Taylor, under the pretence of its being a still-born child. Some days afterwards the body was exhumated, and examined by Mr. Shaw, a surgeon, who simply stated there were marks of indentation about the child's neck; he also stated that the body was in a complete state of decomposition, more particularly the stomach, the contents of which he forwarded to Dr. Turner for analysation. It appears after this that Dr. Turner's assistant on examining the contents of the stomach, found no trace of any poison, but sends word to the jury, "that the small quantity of opium required to cause death in an infant precluded his saying whether it had or had not been used." There certainly was other evidence which warranted suspicion against the parents, but the jury were guided in their verdict by the evidence of the medical men, and, without any thing like proof, have decided on their verdict "wilful murder," &c. Mr. Shaw admits, in the first place, that the child was in a complete state of putrefaction, but yet he could detect marks of indentation about the child's neck, which it is very probable he might have done, but the question is, were they, or were they not, produced before death? Not even this question was put during the evidence by the jury or by the coroner, and as to whether the child had taken opium or not, the evidence proved that she had not taken it, for if sufficient quantity had been taken to produce death even in an infant two months old, the tests, if properly used, would have been sufficient to have detected it. We were as much surprised at the evidence of Mr. Turner's assistant and Mr. Shaw, as we were at the verdict of the jury. In this instance, if the coroner had been a medical man, he would not have allowed them to be led away by such evidence.

CHOLERA AT PORTSMOUTH.

This dreadful scourge has appeared during the last few days amongst the convicts in Portsmouth. We have been informed that five out of seven have died, amongst whom is the Assistant Surgeon, Mr. Edwards. Among a thousand men, filthy and ill-fed, we could not be surprised to hear the announcement of a frightful mortality.

CAUTION TO THE MEDICAL PROFESSION.

To the Editors of the London Medical and Surgical Journal.

Gentlemen,—A few days ago a respectably dressed person called at my house, in my absence, requesting to see me; as he was prevented, he desired to be shown into a room and write a note: he asked for pen, paper, &c., and left the following:—

"Sir,—I should feel obliged if you would call on Mrs. ———, of ——street, as soon as you can make it convenient to-day.

"Yours obediently
"Thomas ——."

I omit the name and address of the party to be visited, and the name of the author, he having assumed the former. I was duped of course. Nothing fortunately of moment has been found missing from the room, but it might have been otherwise. If you think as I do, that it may put my medical brethren on their guard relative to this subject, you will be good enough to give it insertion in your widely circulated Journal.

I am, Gentlemen,
A Constant Subscriber.

London, Dec. 15th, 1834.

[A correspondent has transmitted us the above note. He must be aware that the same trick has been played a hundred times. Medical men should give strict orders to their servants not to admit strangers into their houses "to write a note." If they were to do so the *thefts* would be of course prevented. —Eds.]

Foreign Medicine.

SOCIETE ANATOMIQUE.

November, 1834.

Bullet lodged in the Lungs 25 *Years.*

The ball struck the head of the humerus, which it fractured, then penetrated above the right breast into the right lung. In consequence of the extensive fracture the head of the humerus had received, the limb was amputated. The patient speedily recovered from the amputation, but suffered from frequent accessions of difficulty of breathing, and hæmoptysis, from which, 25 years after the wound, she died. The ball after death was found behind the third intercostal space, in the midst of the pulmonary tissue, which was adherent, together with the pleura of this point, to the third and fourth ribs. The cavern, in which it was lodged, communicated with the dilated bronchiæ.

Laryngitis.

A woman, 24 years of age, died during a paroxysm of suffocation, five days after an attack of acute laryngitis, accompanied with difficulty of breathing and puriform expectoration, &c. On examination of the body, the mucous membrane of the larynx was found healthy, but the sub-mucous cellular tissue, to a great extent, was destroyed by ulceration, the cricoid cartilage was completely denuded and bathed in pus.

Cicatrix in the Stomach.

A man, a patient of M. Rochoux, was subject to the vomiting of black matter, which caused this gentleman to believe he had cancer of the stomach. He died from hæmatemesis. On the autopsy, the mucous membrane of the œsophagus, stomach, duodenum, and a portion of the small intestine were found of a dark red colour. The superior wall of the stomach, to the extent of two inches, was completely destroyed. This loss of substance was filled up by the liver, the fibrous membrane of which was thick and of a lardacious aspect. The surrounding portion of the stomach appeared completely mortified.

Atrophy of the Brain.

At the autopsy of a person, who died of epilepsy, at the age of 26, M. Saint-Yves found one of the hemispheres of the brain considerably atrophied, and reduced at least to two-thirds of its natural volume, compared with the other hemisphere. The circumvolutions of the brain were flat, thin, and indurated. The opposed side of the cerebellum was equally atrophied.

Obliteration of the Crural and Iliac Veins.

The subject of this case was collected by M. Tessier. It occurred in a woman affected with numerous syphilitic ulcers and œdema of the left leg. The iliac vein was obliterated by a false membrane at its entrance into the vena cava. During life no other symptoms than œdema of the opposite leg had excited the suspicion of phlebitis.

Purulent Decomposition of the Blood.

BY M. DUPLAY,

At the Hospital of La Pitié.

On the autopsy of a woman, 29 years of age, who was supposed phthisical, and who was brought to the ward of M. Rostan in a dying state. She stated, that for the last 15 days she had suffered excessively from dyspnœa, diarrhœa, and profuse sweating. This was the whole account that could be obtained from her

On the post mortem all the cerebral veins (dura mater, pia mater, and brain) contained, without offering any trace of inflammation, a liquid of a greyish yellow, earthy, resembling the appearance of pus. Both ventricles of the heart, but particularly the right, were distended by a liquid resembling wine, in the midst of which were suspended small clots of pus. The same fluid was found in the pulmonary vessels, in the aorta, carotid arteries, and jugular veins, without any appreciable lesion of the internal membrane. In the whole extent of the alimentary canal, with the exception of the large intestine, no disease was detected, and in this part there was but slight ulceration. The mesenteric ganglia were swollen and red. The arteries and veins of the mesentery contained the same mixture of blood and pus, as the other parts of the circulating system. The liver was large and indurated, its vessels contained the same purulent mixture. The other viscera, with the exception of the spleen, were healthy, the tissue of this organ was more compact than natural. This curious fact, in which not the least trace of phlebitis could be detected, appears a *primitive* alteration of the blood. The reporter, in forming such an opinion on this case, decides by reporting a remarkable passage from the Clinic of Andral (vol. iv. page 633):—"The epoch, in all probability, is not far distant when we shall return to the idea of Dehaen, who admits that, under certain circumstances, pus may be formed in all kinds of blood."

Monstrous Fœtus with two distinct Bodies.

We extract from the *Annali Universali di Medicina*, the following curious case reported by Angelo Rossini.

On the 15th of February, 1833, says the author, I was called to Mrs. Francesco, aged 43, and the mother of two well formed healthy children. She had been in labour for some hours, and the *sage femme* who attended her sent for me, as the case was very tedious. I found on examination that the feet had passed the external labia, one, the *sage femme* stated to me, descended immediately after the liquor amnii had escaped, and the other she had disengaged herself. I then sought for the arms, and, as I thought, brought one to the vulva, but, on a more minute examination found it to be a third foot, which I again replaced in its former situation. I at first believed there were twins, but, on a more attentive examination, found that it was attached to the same body. I then introduced my hand again, and brought down both the other feet. I found before the exit of the buttocks that there were also two bodies, united together as far as the umbilicus. I was now obliged to semi-rotate the trunk, and, after a little manœuvring, was able to draw the arms down upon the trunk. By rotating the body, and fixing my finger in the mouth, I managed to disengage it from the mother, and, to my surprise, found two distinct heads and two vertebral columns, both of which came into the world at the same moment. The two upper parts of the body united together at the thorax in such a way that no one could perceive in what way they had united. There were only two arms; the two vertebral columns were, however, very distinct; there were four scapulæ, two rectums, and two distinct female sexual regions. The right portion of the fœtus was more developed than the left. It weighed seventeen pounds twelve ounces, and was killed during the process of parturition.

A Fœtus Vomited by a Boy.

The Greek journal, the *Sother*, for the 31st of August, contains a curious case, reported by M. Ardoin, of a fœtus vomited by a young boy, named Demetrius Stamatelli. On the 19th July last, when M. Ardoin was called to see this youth, he found him suffering from acute pains in the abdomen. He prescribed several remedies, none of which in the least assuaged his torments, and he so far gave up all hope of saving the patient, that he recommended the administration of the sacrament.

The next day he gave him an emetico-cathartic, which produced at first slight vomiting; this lasted a short time, when the vomiting returned with excessive pain, and at length he vomited a fœtus by the mouth. The head of the fœtus was well developed, also one arm perfectly formed; it had no inferior extremities, but merely a fleshy prolongation, thin at the extremity, and attached to the placenta by a kind of umbilical cord.

Three days afterwards the patient was much better, all the morbid symptoms were diminished, and he has since continued to improve.

The following is the conclusion of Dr. Ardoin's account of it:—"I carried the fœtus to my house, and there, in the presence of all the medical men at Syra, but more particularly of MM. Milonas and Corco, examined very minutely this anatomical production, which we recognised to be a human fœtus. Afterwards we preserved it in spirits. I made it thus public, so that it might not be considered any imposition."

Foreign Hospital Reports.

HÔPITAL DE LA CHARITE.

Cure of a Pulmonary Excavation, by Local and General Bleedings.

Alexander Meunier, 22 years of age, a dyer, who for the last three years had been residing in Paris, was admitted into the ward of St. Jean de Dieu of this hospital. He stated that he was constantly in contact with the steam of hot water, and had frequently, when very warm, drunk large quantities of cold beer. Till the present period he had enjoyed good health, and had lived a tolerably regular life.

About nine weeks ago, he was attacked with a slight dry cough. A medical man that he applied to, ordered him baths and good living. He was unable to bear the baths; lived well, and in a short time he was attacked with spitting of blood.

On the 30th of July last he was admitted into the Hôtel Dieu for diarrhœa, where he remained for some time. He was also troubled with copious nocturnal sweating. An issue was made under the right clavicle, and some sweet mucilaginous ptisane prescribed. In six weeks he left the hospital without finding much relief; he however spat less than when he entered.

On his admission into the hospital of La Charité he had a pallid countenance, frequent cough, and spat a large quantity of salt purulent mucus. By percussion a dull sound was emitted at the upper part of the right lung. By auscultation cavernous respiration was distinctly heard in this part, which alternated with a gurgling noise. On the left side the respiration was puerile, and the sound emitted clear and resonant. Four *pallettes* of blood were taken from the arm; also four *pallettes*, by means of cupping-glasses, from the region of the chest. Broth diet, emollient cataplasms, &c.

The patient expressed relief after the evacuation of blood, still the engorgement of the right lung remained much the same. Fifteen days afterwards the bleeding was repeated, and he became much better. The dull sound on the right side has greatly diminished, but not entirely disappeared; eight days afterwards cupping-glasses were applied to the affected region with advantage.

Since this last application, the patient has made great progress; all the symptoms have diminished, and for the last three weeks the patient has neither coughed nor spat; there is now almost a clear sound emitted from the part, corresponding to the chronic pulmonary induration; the cavernous respiration may still be heard, but much less than a few weeks ago. The patient can walk about without suffering from difficulty of respiration, and he is getting quite fat.

The symptoms continued on the decrease; he was bled once more. A few weeks afterwards not the least trace of pulmonary disease could be detected, either by auscultation or percussion; cough disappeared, and he has evidently quite recovered.

This, we are fully aware, is not the first case that has been recorded as a cure in consumption, and we still remain confident, that if a thousand cases were put under the same treatment not above one amongst them would recover. What the cause of this tuberculous deposition is we do not hesitate to say we know not; in which way the bleeding lessened the scrofulous tendency we will not attempt an opinion,—enough is, the patient recovered under its treatment.

British Hospital Reports.

ST. THOMAS'S HOSPITAL.

Use of Créosote.

When this medicine first became fashionable, we promised our readers to watch its virtues, and, if it possessed any such wonderful powers as our continental neighbours reported, we would illustrate each successful case in this Journal. We have ever since been watching it in this hospital, where, perhaps, more of it has been used than in any other hospital in London. Upwards of fifty cases have been under its influence within the last six months; it has been given in cases of rheumatism, in phthisis pulmonalis, in hysteria, epilepsy, diseases of the uterus, &c., and scarcely one of the patients received the least mitigation from its use. At first, in a case of epilepsy, certainly, it appeared to lessen the paroxysm, but after the boy had been under its influence about a month all its effects over the disease appeared lost, and, in fact, the paroxysms were more violent than before its exhibition. There was another remarkable case of sarcoma of the uterus; the woman was in Mary's Ward; when she came in she had a very fœtid discharge from the vagina, complained of pains in her loins, had become emaciated, and her countenance indicated some organic disease. On an examination per vaginam the os uteri was found exceedingly indurated, and touching it, gave the woman pain. Now, for some time she took the créosote; the pains in her back gradually subsided, the discharge stopped, and on another examination, about two months from the time of her admission, the tenderness and induration about the mouth of the uterus had entirely disappeared, and the patient got quite fat. Unfortunately, when so well she was suddenly taken with violent vomiting, diarrhœa, &c., and died. In another case of Dr. Elliotson's, in Mary's Ward, of which we have some time since given a full account in this Journal (page 139, vol. vi.),

it appeared also to do a great deal of good; but, in a similar case since, it completely failed. As an external application it may be a remedy, if properly and carefully applied, that may be of much service to the general practitioner. We have seen, for example, its good effects in a patient named Thorp, who was 47 years of age, and admitted into Mary's Ward last August. She stated for eighteen months she had suffered from an eruption; this, according to her own description, appeared in the following way:—Small pimples first made their appearance, these suppurated, and became confluent. At first the disease commenced on the top of the head, here it ran through its different stages, quite disappeared, and reappeared on the back of the neck, where the disease made a similar progress, and then left both these situations. After this her nose and face became the seat of this eruption, and her right arm became likewise affected. Now, on her admission, the disease was seen on both these latter situations. On the face it had somewhat the appearance of active rosacea, but on the arm farther advanced, presenting several deep, rugged ulcers, forming a quadrilateral space at the lower and anterior part of the fore-arm. This woman applied, in the form of wash, the créosote to her arm and face, in the proportion of two drachms of créosote to a pint of water, and at the same time she took three minims three times a-day internally. The ulceration in the arm became speedily well, and her face was not quite so red. After being in the hospital three months her face became comparatively well also, and at this period the same eruption made its appearance on the legs; the wash was applied here, also; the ulceration of this part soon healed up, but then it affected the lower part of her legs. From this place it nearly disappeared, when she at length became tired of the treatment, and left the hospital.

Thus far we cannot say much for the créosote. There was a case, however, of scald head in William's Ward, and the créosote was applied in a pure state to the affected part of the scalp, and in the course of a few days the child's head certainly got well.

We have now said sufficient to prove to our readers, that the créosote, which a short time since was almost powerful enough to raise the dead to life again, is now considered a remedy of but little service. Both in France and Germany, particularly the latter country, this medicine is still said to be of the greatest utility; and what renders this statement so absurd is, they administer it in pills, in which form, if there were any powers at all in this medicine, from its volatile property they would be lost. It appears to us so very strange that the constitutions and diseases are so very different, when even of the same nature in these different countries, that one particular person should be so very successful in his practice with one remedy, when his neighbouring practitioner, although administering the same remedy, the same dose, and giving it in the same form, and for the same disease, should find not the least benefit from its use. When we first spoke of this remedy, we stated, from the flourishing accounts given of it, that we were fearful it was good for nothing, for in every instance that a remedy has been found so beneficial in every disease, its virtues have been found nearly as efficacious as the exhibition of bread pills, and this is our true opinion as regards the internal exhibition of the créosote, but occasionally as an external application it may prove useful.

ST. GEORGE'S HOSPITAL.

Encysted Tumour of the Neck.

Eliza Macdonald, aged 18, was first admitted as an out-patient under the care of the senior assistant-surgeon, Mr. Walker. During a period of six months she took steel and iodine internally, and the iodine ointment was at the same time applied externally to the tumour. A grooved needle was twice introduced into the part, and from one to two ounces of thin pus were let out each time. During the early application of these remedies, the size of the tumour manifestly diminished, but it was never less than the size of a Guinea fowl's egg. Finding the tumour did not diminish beyond this point, Mr. Walker recommended her to come into the hospital, and have the tumour removed, to which she consented. In performing the operation, Mr. Walker commenced by making an incision of about three inches in length through the integuments covering the tumour, in a line running parallel with the anterior edge of the sterno-cleido-mastoideus muscle. The dissection was carried down to the substance of the tumour, which was removed along with the cyst containing it, together with a portion of the inferior substance of the parotid gland, which was found firmly adherent to it. There was a great deal of thickening and adhesion between the cellular membrane and the cyst of the tumour, deep under the angle of the lower jaw; and, at the latter part of the operation, during the deep dissection of the parts, the superior thyroid artery was divided, which, with another small muscular branch, were the only arteries requiring to be secured. The edges of the wound were drawn together by sutures.

Vespere. Great difficulty in respiration, with a partial inability to swallow; in every other respect she appears comfortable.

July 15. She breathes much better, but remains still unable to swallow without very great difficulty. She took an opiate last night, which relieved her. Haustus salinus c. tinct. hyoscyami, ℥xxx. in sing. haust. 6tis horis sumend.

Vespere. Rather better. The bandages over the part appearing to be too tight were divided, which appeared to give her immediate

relief. They were much saturated, apparently with the secretion from the parotid gland tinged with blood.

16th. The difficulty of respiration increased this morning to an alarming extent; and, in consequence of her livid appearance, the house surgeon took off all the dressings, and opened the wound; it was found to be filled with a large coagulum of blood, the only apparent source of which was from the open mouth of a small cutaneous vessel at the upper and back part of the wound. The hæmorrhage was arrested by the application of blue lint to the parts, with light, simple dressing over the whole wound. Leeches were applied to the opposite side of the neck to relieve the excessive laryngeal irritation, which had the desired effect. Beef-tea enemata with hyoscyamus were administered every two or three hours during the day.

Vespere. The leeches still bleeding, which seems to occasion her some inconvenience. Her countenance is cadaverous.

17th. She appears to have rallied very much, and is certainly better to-day. The beef-tea enemata, with tinct. hyoscyami and sp. ammon. arom., have been continued. She complained of great thirst yesterday, which the enemata have removed. She cannot swallow anything. One ligature has come away.

18th. Going on very well in every respect.

22nd. Wound was opened, and looked clean and healthy. The ligature from the superior thyroid artery came away to-day.

27th. Going on very well.

From this period she continued to improve, the wound healed kindly, and she left the hospital quite well.

Calculus in the Urethra.

A little boy was brought into the operating theatre on Thursday, Dec. 11, having been admitted only on the preceding day, with calculus in the urethra. The calculus being found in that part of the urethra situated behind the scrotum, a female catheter was introduced, and the calculus pushed backwards behind the scrotum nearer to the prostatic portion of the urethra. A grooved sound was now passed down upon it, and the child having been bound as for the operation of lithotomy, Sir B. Brodie made an incision in the same direction, but rather higher up than in the operation for lithotomy, and cut down at once upon the stone, and removed it with his fingers. It was dark coloured, phosphatic in its composition, and about the size of a hazel nut. No bleeding accrued, and the child was sent back to bed. Sir B. Brodie remarked that his reason for pushing the stone back towards the bladder and behind the scrotum, was to avoid the danger of cutting through the cellular tissue of the scrotum into the urethra, and thereby preventing infiltration of urine into the scrotum, which would cause inflammation and sloughing, or, at all events, very troublesome abscesses; his reason for using the sound was that it might prove a guide to him in case of any unforeseen accident occurring during the performance of the operation. We visited the little boy the next day, in company with Sir Benjamin Brodie, and found him doing remarkably well; the report of the nurse was that there had been no bleeding from the wound, that some urine came through the incision, but the greater portion came through the right passage.

Dislocation of the Knee-Joint.

George Allen, ætat. 16, was admitted into the hospital (Oxford Ward) during Sir B. Brodie's accident week.

From the history which we gathered from him, it appears that whilst in the act of pulling off a shoe from the fore-foot of a horse, the animal kicked him and knocked him down, and trod at the same time on the inside of the right knee. He was unable to rise from the ground, and when lifted up he was unable to walk. In this state he was brought to the hospital. On examining the knee-joint, it was found to be dislocated laterally, the parts around were considerably swollen, tense, and painful; the internal condyle of the femur rested on the external semi-lunar cartilage of the tibia; the external condyle of the femur presenting downwards, and the internal condyle of the tibia upwards, symptoms which Sir A. Cooper states sufficient "at once to disclose the nature of the accident."

The boy was immediately put to bed, and the methods employed in reducing the dislocation (viz. gentle extension and pressure of the head of the tibia in the required direction) soon proved sufficient to restore the bones to their natural position. Splints were applied on each side, and bandages were placed over the joint, and the strictest rest of the part enjoined. Two hours after his admission, Sir B. Brodie saw him, and ordered a number of leeches to be applied to the joint, the strictest rest, and the most rigid antiphlogistic treatment. Sir B. Brodie remarked that such cases were rare, and he supposed that in general under such circumstances all the ligaments of the joint were ruptured, and the leg twisted in some slight degree. The house-surgeon suspected that part of the external condyle of the femur was also fractured, but the swelling and tension of the parts prevented this from being accurately ascertained. Leeches were applied plentifully to the joint at various times, and the inflammation of the parts having considerably decreased, the line of fracture of the external condyle could be distinctly felt, of about an inch and a half in length, running in a line parallel with the bone. The limb was ordered to be placed in junks, and, on the next visit, we found that the skin over the external condyle of the femur, where the bone was fractured, and where the injury had been inflicted at the time of the

accident, had sloughed away to a small extent, and a poultice was ordered to be kept over it. The discharge from the small wound, consisting partly of pus and partly of synovia, continued for some time, but his general health nevertheless continued good. On visiting him, Sir Benjamin Brodie remarked that nothing more could be done for him than to keep him quiet in the horizontal posture, and that with regard to the synovial discharge from the joint, he had known it in some cases to continue for weeks without materially affecting the constitution.

The boy was kept for some weeks in bed, and at our last visit to him, previous to his discharge, Sir B. Brodie further observed with reference to the external wound, which was now nearly closed, "that the circumstance of its occurrence *after* a fracture was a very different thing to its being present and connected with a compound fracture; in the latter case the cellular tissue might inflame and spread, from which circumstance mischief might occur, but in the present case, the adhesion of the parts caused by the ulcerative process prevented the above-named after symptoms from occurring.

We have noticed this case, not because it presents any peculiar points of practical importance, but that our readers might have the opportunity of perusing the report of a case which very rarely occurs, even in hospital practice.

Injury to the Brain.

The following case was admitted about a month since, and affords a strong proof of the efficacy of powerful *local* depletion in cases of cerebral injury.

Elizabeth Buckwater, ætat. 10 years, was admitted by Sir B. C. Brodie on the 12th November. Her mother who brought her, gave the following history of the injury of the brain, under which the child (from her peculiar idiotic appearance) evidently laboured. Five weeks previously, whilst playing with some of her companions, she received a blow over the right temporo-parietal region of the skull from a stick. There was slight swelling of the part at the time (of this fact, however, the mother would not be positive), and ten minutes after she received the blow she fell down in a fit, an occurrence which her mother related had never happened to her before. Since then, however, they have come regularly on her every day, and she has had sometimes as many as ten fits in a day. The only complaint the child makes is of general pain in the head. Before the fit comes on, she states that she feels pain in the right side of the chest, which spreads to the left side of the chest, when the fit actually comes on. From such an unsatisfactory history no accurate prognosis could be formed of the case, but this was in some measure cleared up by the occurrence of a severe fit (caused by the unusual excitement to which the last few minutes had subjected her) before she left the admission room. She was standing up, and, suddenly uttering a cry of fear, she fell back, grasped her head convulsively with both her hands, (her features being at the same time violently distorted, but not inclined more to one side than the other) and then sunk back insensible. There was no foaming at the mouth, nor any cry of anguish, or low moan, as in positive cases of epilepsy, yet we believe the general opinion of those who witnessed the case was, that it partook of the mixed nature of epilepsy and apoplexy.

She was ordered to be immediately admitted and sent to bed, and to be cupped over the temples to ℥ x., and pulv. scammon. c. calomel, gr. xij. to be given directly.

Nov. 13th. The report to day states that (owing most probably to the cause we have ventured upon above) she had three distinct fits within twenty minutes after her admission. No fit, however, has occurred since she was cupped. She is perfectly sensible this morning, and complains of no pain in the head, nor does she complain of any uneasiness when the scalp was manipulated; there is no evident anxiety in the countenance, and there is less of the peculiar epileptic expression than when she was admitted; she slept well last night; the pulse is about 100, but weak and small.—Applic. empl. cantharid. nuchæ.

Nov. 20th. Very much improved in every respect; she has had no fit, nor any sensation resembling it; the blister discharges well, and she is taking mild doses of sulphate of magnesia in infusion of roses twice daily, which freely opens the bowels. Her answers to all inquiries are that she is quite well.

From this date up to the present (Dec. 12th) she has had no fit whatever, nor any symptom of any, and she has lost all unusual expression of countenance.

We are more inclined to consider this case as one of peculiar vascular irritation rupturing some of the fibres of the external cerebral convolutions, than one of effusion of blood beneath the skull or dura mater, from the sudden and immediate cessation of all convulsive action after the first free removal of blood from the part by cupping.

The child is now, to all appearance, quite well, and was discharged cured on the 15th.

SIR B. BRODIE'S CLINIC.

One very great advantage which the pupils of St. George's derive, is from the excellent method of clinical instruction pursued by Sir B. Brodie, who never goes round the hospital or visits any interesting case, without offering some valuable observations upon it, replete at once with the greatest practical interest both to the student and the junior practitioner. We subjoin some of these, and shall take especial note, for the benefit of our readers, of any future clinical observations which Sir Benjamin Brodie may make.

Morbid Affection of the Cellular Membrane —Erysipelas.

"I have formerly spoken to you of the œdema and serous infiltration of the cellular membrane which we see take place in certain cases. The serum, in these cases, appears to poison the cellular membrane, and to produce the death of the part, which sloughs and comes away. The discharge stains the bandages; and I sent some of it to Dr. Prout, who detected Prussian blue in it. The remedy, in these cases, is to puncture the part every day if necessary, and to let out the effused serum as fast as it forms, and not to let it collect." These remarks were made with reference to a man's case, who has a fracture of the humerus extending, we believe, into the elbow-joint. He has had an attack of erysipelas, which was not preceded by or accompanied with shivering; with reference to which Sir Benj. Brodie remarked, "that such erysipelas was generally a diagnostic of some severe *internal* mischief; it would occur sometimes on the scalp from effusion between the dura mater and cranium, and generally occurred a short time previous to death." Here, however, in this case, there was no such serious injury, it appeared to arise from a costive state of the bowels.

Injury of the Spine—Bloody Vesicle— Hysteria.

A man was admitted, a few days ago, having received a severe fall, and lost all power over the lower extremities. A vesicle, filled with dark coloured serum, has appeared on the upper surface of the dorsum of the right foot. The temperature of each was higher than natural. Sir B. Brodie remarked, "that he had never met with a similar case; he had seen something similar occur in women of a low hysterical temperament, where there was an extreme degree of nervous excitability."

Affections of the Knee Joint.

"A case of inflammation of the synovial membrane of the knee-joint may occur, and may terminate in the formation of abscess; but such abscess may heal, and the patient may ultmately recover with an anchylosed joint, which, after all, is a thing to be desired and hoped for in such cases. Whenever the affection commences in the synovial membrane, even if it goes on to destruction of the cartilages of the bones, I always have hopes of the patient recovering. The great thing in these cases, in their treatment, is to keep the limb in the most perfect state of immobility. I have seen three cases of this affection recently in private practice; one lady had abscess of the knee-joint arising from inflammation of the synovial membrane, and she came up all the way from Norfolk; she was under my care for two months, during which time she kept her limb in the most perfect state of rest, and she recovered. These cases sometimes take a long time to cure, as matter will sometimes burrow among the muscles and tendons for some time after the original abscess has healed. The great mistake which I believe arises in these cases, is from the circumstance of surgeons confounding these cases which commence in the synovial membrane with those which commence in scrofulous diseases of the bones themselves; in these latter cases there is no chance where they occur in adult age, and but very little where they occur in youth. It has been said, and very wrongly said, that you should make but a very small opening into a joint when there is matter in it; but the fact is, that the joint is no longer a joint but an abscess, and should therefore be freely laid open, to allow of the matter discharging itself as fast as it forms. Sometimes the joint recovers itself in a very distorted state. I know of a case in which the tibia was half dislocated, but by care the joint was restored to its usual state. The limb, generally, is turned somewhat outwards, and flexed, which, indeed, is a much better position for it than if it were quite straight, especially in sitting down; but if the patient requires it, the limb can be made straighter by using that instrument which the boy wears in the other ward."

Bursæ.

To a remark made by the house-surgeon, that several cases of enlarged bursæ had, within the last twelve months, died, notwithstanding the most active treatment, and wishing to know Sir B. Brodie's opinion of such cases, Sir B. Brodie remarked, "that he believed blistering over their surface was the best plan of treatment to adopt in such cases, and at the same time added, that he was in general very loth to meddle with them where they were situated under muscular structures, except absolutely obliged. The plan which I have found most successful in such cases, and which I have never known to fail," continued Sir Benjamin, "is that of simply keeping the arm bound to the side, and puncturing the bursal tumour, and letting the fluid out: this plan more particularly refers to affections of those bursæ situated under the deltoid muscle, or between the sub-scapular muscles and latissimus dorsi. The worst of these cases is, that you do not know where they come from, and that, when you find them in these latter situations, they most frequently are found to descend from the shoulder-joint. Sometimes they will bear dissecting out; at other times such an operation is followed by very bad symptoms. In removing or operating in any way upon parts which are situated under muscles, a great deal depends upon the manner in which you divide the muscle; if, for instance, you open a bursa under a muscle, and divide that muscle in

the course of its fibres, the very action of the muscle afterwards will draw the fibres together, and there will be no free exit for the contents of the bursa to escape; but if, on the contrary, you cut the muscle across its fibres, they do not contract together, and allow free passage for the discharge, and the muscle in time unites again as well as ever. In cases of exostosis of bone under muscles, I have known a very simple case very nearly terminate fatally from matter forming and burrowing under the muscles. I knew of a case in Mr. Keates's practice of this nature, and I have heard of some others."

Splints, &c.

"I believe I was the first to introduce the use of long splints into this hospital, when I was assistant-surgeon here, and we used very frequently to have sloughs (as in this case), but by the employment of the cross-board at the foot, this occurrence very seldom happens, as it keeps the splints in some measure apart from each other, and prevents too great pressure. I believe, too, that at that time we used too great extension, which is not required, nor did we use sufficient bandages to the limbs then. The old Queen, I remember, used to send us every year a large supply of the old linen of her household, and we used to cut up the damask into slips for bandages, which did not do as well as calico, which was then very dear, and we did not then buy bandages, as we do now.

Compound Fractures.

"In the treatment of these cases, a great deal depends on the delicate handling of the parts by the surgeon, as I have seen several cases, where this has not been attended to, not do so well."

Affection of the Knee-joint.

There is a man in one of the upper wards at present, under the care of Sir B. Brodie, with an enormous swelling of the synovial membrane of the right knee-joint: we do not exaggerate when we say that it is as large as a child's head. The patient was in the hospital some time since, and it was done up, according to Sir B. Brodie's plan, with plaster and bandages, leather splints, and rest, and the knee somewhat diminished from its large size. The air of the hospital not agreeing with him, however, he went out, and, from not taking proper care of himself, the knee-joint soon became as large as ever; he was again admitted, and has been in the hospital now for some weeks. Sir B. Brodie put him under Mr. Scott's plan of treatment, with mercurial ointment and alternate compresses and bandages, in which the knee was done up, and kept perfectly at rest for some weeks, and upon being undone to-day (Nov. 22), the large size of the joint was found to be diminished, and the same plan of treatment was ordered to be persevered in. Sir B. Brodie remarked, "that the case was one of unusual increase in quantity of the synovial fluid of the joint; he did not feel himself authorised to amputate the limb in such cases, as he thought that by some means or other they ought to be cured." A student having asked whether it would be advisable and what would be the result of puncturing such a joint to let out some of the synovia, Sir B. Brodie answered, "that he did not in his present experience believe that either good or harm would result from it, but he could easily believe that eventually harm might result from such a practice being persevered in."

Effects of Arsenic.

"Whenever arsenic excites pain or tormina in the bowels, it should be of course discontinued. I know a lady, in whom it generally causes a puffy œdema of the face whenever it is taken, but no other part of her body is affected by it."

WESTMINSTER HOSPITAL.

Fracture of the Base of the Cranium.

—— Field, ætat. thirty-eight, was admitted into Percy's Ward on the evening of the 13th of April, under Mr. White. A short time previously, he went into a public-house in the neighbourhood, but, being tipsy, was ordered to leave the house, and go home. He left the house, but stood irresolute at the door for a minute or two; he then made a step, fell backwards down three or four steps, striking the back part of the head against the ground. Such was the report made by those who brought him to the hospital. On admission the head was shaved, and then carefully examined, but neither fracture, wound, nor other injury could be detected; there was not any tumefaction, and he did not wince under pressure applied to any part of the head. A scar and depression, evidently of ancient date, on the back part of the head, were all that could be discovered. His symptoms were nearly utter insensibility; he makes a muttering and unintelligible noise when any one attempts to rouse him; stertorous breathing; pulse small and slow; pupils neither dilated nor contracted, but perfectly insensible to the stimulus of light; hæmorrhage from the eyes, nose, ears, and mouth.—Ordered cold lotions to the head, and purgation, to be kept quiet and low.

14th. Passed a restless and disturbed night; there is no tumour on the scalp; the bowels have acted; the pupils remain as at last report, and he still continues insensible.—Continue.

15th. Was rather outrageous in the commencement of the evening, but gradually became quieter; had enemata this morning, which returned without producing any effect; pulse small and quick, but not frequent, 90.

17th. The symptoms continue unrelieved; he was bled last night from each arm, and about sixteen ounces of blood drawn; the blood first drawn was rather buffed, and a great quantity of serum separated; from that which was drawn last there was comparatively little serum and no buff; the pupils were then rather more dilated; pulse 116, but it fell after the bleeding; is still stupid, but less so than he was; puts out his tongue when ordered to do so; tongue covered with a brown fur; at present the pupils are not so much dilated; is unwilling to have his eyes examined or even touched; says he is not in pain; no heat of scalp; catches his breath; bowels open.—Capiat cyathum vinosum mist.—Sir A. C.—Bis in die.

18th. Continues in much the same state; a dozen leeches were applied to each temple, but without advantage, and he died in the evening. The pupils were not dilated at any time during the progress of the complaint.

Autopsy.—On examination a fracture, unattended with depression, was discovered extending from the occipital protuberance on either side along the occiput, through the petrous portion of the temporal, as far as the body of the sphenoid; the bones, on which the anterior lobes of the cerebrum rests, was splintered on the right side, and the lobe itself lacerated. There was also a laceration of each lateral sinus as it passes through the sulcus arterialis in each temporal bone, with considerable effusion of blood at the base of the brain The optic nerves were surrounded by coagula.

The medical and surgical officers of this institution have opened the campaign in earnest. Punctuality is the order of the day; diligence and attention, the watchwords.

Clinical instruction, it appears, will not be wanting. The senior surgeon, Sir A. Carlisle, has commenced; the junior physician, Dr. Roe, has notified his intention of following, and Mr. Guthrie will pursue the same course after Christmas. Meanwhile we have heard some whispers, intimating that certain cases are to be collected into special wards, in order that they may furnish subjects for lectures. We do not despair of the establishment of clinical wards.

We feel inclined to lay the substance of Sir A. Carlisle's clinical lecture before our readers. He commenced by contradicting a report (which he said was prevalent) that he was indifferent to private and public practice, and he assured his hearers that in no instance would he be found inattentive to their interests. He then remarked that the cases which he intended to notice, were very simple. The first was a case of burn. Burns and scalds differ under certain circumstances: when a part is exposed to a high temperature, and that for a considerable length of time, so that the vascularity, and, consequently, the life of the cutis vera is destroyed, and corrugation takes place, it is called a burn. The first effect of a temperature, like that of boiling water, or somewhat higher, if not long applied, is inflammation and vesication; in this case we have a scald. The fat from a frying-pan, which is seldom less than from 400° to 500°, produces a burn; the light gause which ladies wear, when set on fire, seldom causes more than vesication,—than a scald.

As a general rule, burns are more dangerous than scalds; the heat being greater and longer applied causes a slough, which must separate and be followed by suppuration and granulation, ere cicatrisation can ensue, as a necessary consequence, therefore, there is more constitutional disturbance. When a burn or scald has decorticated one-half of the human body, nine out of ten will die; in fact, I never saw any recover. They die of pain, like those who perish under military flogging; men have expired while at the halberts. The same takes place occasionally with protracted and painful surgical operations. The operations of old Mr. Keate used to be more successful than those of Sir Cæsar Hawkins. Sir Cæsar Hawkins was of opinion that an operation was soon enough done if it were well done, and was, generally speaking, almost twice as long as Mr. Keate in doing them. The latter was a rough, harsh man, but speedy in his operations, and, as the result, he had very little symptomatic fever, or constitutional fever.

It is a bad symptom, during the performance of a painful surgical operation, or during military flogging, if the patient should vomit. So well is this known in the army, that if it were to occur while the man is at the halberts, he is taken down directly, in order that he may not die under the drummer's hands. An operation was performed at the old hospital for an ununited fracture of the femur; a false joint had formed, and the limb was of no use to the man. A consultation was held, and it was determined to cut down upon the bone from the outside, and saw off the two ends. It was done on the outside to avoid injuring the vessels, which were also kept out of the way during the operation by a metallic spatula. The surgeon was very skilful and a good anatomist, but, from some difficulties which were not foreseen, it was protracted for an hour and a half. In this case vomiting occurred while the patient lay upon the table. Brandy, various preparations of opium, aromatics, &c., were administered, but were all rejected. The patient was very near dying that night. It was at last determined to let him alone; he got better, and finally recovered.

There is great difficulty experienced in deciding on the treatment of burns and scalds. I think cold applications are the most useful. Dr. Kentish recommended the use of stimu-

lants, but, if I recollect aright, for burns only, not scalds; formerly they employed linseed oil with lime water. If you are called in directly the accident has happened, you should apply iced water; the first effect is inflammation, and, by the topical application of cold, you will allay irritability and pain, and lessen the sensibility of the nervous system, thus removing a source of mischief. This plan of treatment may be continued with scalds throughout, and also with burns, if not of great extent. If the burn be extensive, stimulants may be used afterwards, but not until the first effect, viz. inflammation, has ceased. I once saw a man treated with the ointment called C. M. P., which means *cerate mixed with precipitate.* It is composed of a pound of ceratum resinæ, a pound of ceratum calaminaris, and two ounces of red precipitate. It is a favourite application with Mr. Lynn. Well, this man was dressed with the C. M. P. In four days he was labouring under severe ptyalism *, and very violent mercurial action; exfoliation of a great portion of the jaw took place.

When the ulcers from the burn are granulating, the neutral cerate will be found to be the best remedy. I do not think much of constitutional treatment; diaphoretics, if they act at all, do harm, and opium is not beneficial. Purgatives may do good occasionally. It is a common effect of all painful diseases to arrest the peristaltic action of the bowels, and therefore aperients are called for, and unloading the alimentary canal, may tend to prevent or diminish irritative fever.

The next case to which I shall call your attention is that of a boy with an injury to the leg, and an enlargement of the head of the tibia. It is a strumous affection, but arose from a blow on the shin. Had he been older, the bone would have perished, but the bones of children can bear more, and are not so liable to exfoliate, or enter into the state of necrosis; if, however, there be struma in the constitution, the bone will become affected. The boy is getting better, but the wound is sluggish and languid. In this case, gentlemen, warm dressings and warm plasters over the bone will do good. The only constitutional remedies which I employ are chalybeates, with proper attention to diet. I never give mercury in scrofula, because it always does harm: it invariably causes a debilitated condition of the body. In all cases of struma, where you have a very languid circulation, with cold hands and feet, clean tongue, countenance and lips pale, without febrile heat, chalybeates and the sea air will be serviceable; but when there is hot skin, with a quick pulse and flushed face, they will prove decidedly injurious. As a chalybeate, I prefer the ammoniuret of iron to the other preparations of steel, and a good way to give it is in the form of pill. The salt is deliquescent; and, to make it readily into pills, it should be mixed with wheaten flour. A drachm of the salt with half a drachm of farina, beaten up with a little water, will make a tough paste, which can be divided into pills of a proper strength, and will not deliquesce. If given in small doses, it does not cause heat, flushings, headach, or constipation; there is also an excess of ammonia in the preparation, which will neutralise any acidity there may be in the primæ viæ. Alkalies are also exceedingly useful; ten or fifteen grains of soda two or three times a-day will be found of benefit; it will reduce the pulse, but, as it is rather depressing, it should not be employed where that action is not required. In such a case, ammonia may be advantageously substituted.

* [We recollect seeing a patient at this hospital with an extensive ulceration on the leg. It was dressed with C. M. P., and in a few days the man was salivated. This was, of course, said to be owing to the ointment, but, on investigation, it turned out that the cerate was made by accident with the *semi-vitreous oxide of lead* instead of *red precipitate.* The cause of the ptyalism was not discovered.—Rep.]

MIDDLESEX HOSPITAL.

Operation of tying the External Iliac Artery for Femoral Aneurism.

On Wednesday last the operation of tying the external iliac artery was performed by Mr. Arnott on a man apparently about 40 years of age, for the cure of femoral aneurism, which originated from a violent sprain.

The man having been placed upon the table, an incision was made about two inches and a half in length, commencing a little above, and to the outside of, the centre of Poupart's ligament, and carried directly upwards. The skin, fat, and superficial fascia having been cut through, the external and internal oblique and transversalis muscles were carefully divided upon a director; the peritoneum being thus exposed was then separated from its attachment, and gently drawn inwards. The artery being thus arrived at, a ligature was passed beneath it from without inwards. In this stage of the operation a little difficulty arose from the ligature becoming entangled, in the attempts to disengage which the artery burst; however Mr. Arnott immediately grasped it between his finger and thumb, and thus commanded the bleeding, while Mr. Mayo applied another ligature. A second ligature was then applied below the orifice in the artery, in order to command the hæmorrhage that would otherwise have occurred from its free anastomoses.

After the operation, Mr. Arnott stated the bursting of the artery was caused by its having become ossified at the part at which the ligature was entangled.

APOTHECARIES' HALL.

Names of Gentlemen to whom the Court of Examiners granted Certificates of Qualification on Thursday, 11th Dec.:—Henry Hayward, Aylesbury; Anthony Dolee, ———; Charles Goodwin, Norwich; John Hughes, Llanrwst; Chas. Stokes, London; William Thos. Dalby, Bow, Middlesex; Edw. Henley Finley, London; Chas. M'Dermott, London; Wm. Jones, Henley-in-Arden; Joseph Blackshaw, Stockport; Wm. John Gaye, Shefford; Henry Elsegood, London.

MISCELLANY OF FACTS.

A case of some importance to the profession was tried last week in the Court of King's Bench. It was an action brought by a husband and wife against a person named Woolley, residing in Dorset-street, Bryanstone-square, for injury inflicted on the female plaintiff by a dog of the defendant's running at and biting her severely in the leg, so severely as to render it necessary to have surgical assistance. In the course of the trial, Mr. Lomax, surgeon, was called, but before he gave his evidence he said he was a Member of the Royal College of Surgeons, and that, when he was subpœnaed, he only received one shilling.

Lord Denman—Well, sir, where do you live?

Mr. Lomax—In Dorset-street, Portman square.

Lord Denman—Then you are not entitled to any more.

Mr. Lomax—But I have usually received one guinea with a subpœna.

Lord Denman—You are sworn, and must give your evidence.

This is a point in which something decisive cannot be too speedily ascertained. The hardship on the members of the profession, if the dictum of the Lord Chief Justice is incontrovertible, is so apparent, that legislative remedy must be applied to it as speedily as possible, else it will be absurd to expect the attendance of professional men as witnesses upon trials of the sort alluded to; in which case it is perfectly evident that the most material portion of the testimony to enable the jury to come to a right conclusion as to the amount of damage inflicted, and the facts, if any at all, will not be forthcoming.

Substitute for Coffee and Snuff.—A curious discovery is spoken of by *Le Voleur*, no other than a plant which it is only necessary to look at when there is a desire to sneeze, and which, when reduced to powder, makes a delicious beverage, somewhat similar to coffee.

APPOINTMENTS.

Naval.—Mr. M. Kennedy, surgeon of the Nimrod. Mr. A. R. Hoblay, assistant-surgeon of the Victory. Mr. Taylor, assistant-surgeon of the Curlew. Mr. D. Kean, assistant-surgeon of the Spitfire. The following gentlemen have been appointed to the rank of surgeon:—H. D. R. Henning (1825); D. G. Miller (1825); James Bankier, M.D. (1827); J. Watson (1827); J. S. Hampton (1829); and Joshua Brooks (1829).

General.—Dr. R. Townsend, surgeon to a public institution at Castlehaven, Cork.

DEATHS.

Mr. George Swinden, surgeon, of Dewsbury. Mr. William Cooke, of Wolverhampton, surgeon. Mr. William H. Hervey, of Bridekirk, Cumberland, surgeon. Mr. Charles Bingham, of Boar-street, Lichfield, surgeon. Mr. M. M'Lean, of Nicholson-street, Edinburgh, surgeon. Surgeon James Holmes, of Donoughmore Dispensary, Ireland. Mr. R. Dunn, surgeon, R.N. Dr. Whistler, of Galway. Mr. J. G. Dalton, of Killeshandy, surgeon. At Van Dieman's Land, Dr. Allan, R.N. Mr. W. H. Wells, surgeon, of New Buckenham-place, Great Dover-street.

WEEKLY BILL OF MORTALITY.

London, Tuesday, Dec. 16, 1834.

Age and Debility	39	Hooping-Cough	7
Apoplexy	7	Inflammation	22
Asthma	17	Inflammation of the Bowels & Stomach	1
Cancer	5	Inflammation of the Brain	2
Consumption	50	Inflammation of the Lungs and Pleura	12
Convulsions	19	Insanity	3
Croup	2	Jaundice	1
Dentition, or Teething	9	Locked Jaw	1
Diarrhœa	1	Measles	16
Dropsy	11	Mortification	2
Dropsy on the Brain	6	Scrofula	1
Dropsy on the Chest	1	Small Pox	10
Fever	4	Stone and Gravel	1
Fever, Intermittent or Ague	1	Thrush	1
Fever, Scarlet	9	Tumour	2
Fever, Typhus	3	Unknown Causes	2
Gout	1	Stillborn	9
Heart, Diseased	2		
Hernia	1		

Males 157 Females 135 Total 292

LITERARY INTELLIGENCE.

On the 1st of January, 1835, will be published, No. I. price 2*s.* 6*d.*, of the Annals of General Science. Conducted by ROBERT D. THOMSON, M.D., with the assistance of THOMAS THOMSON, M.D., F.R.S., &c., Professor of Chemistry in the University of Glasgow. To be continued monthly.

CORRESPONDENTS.

The communication of *H. H.* shall appear in our next.

A Student.—The requisite term for hospital attendance will more probably be lengthened than diminished. The present term for the regulations is not one hour too long.

A St. Thomas's Pupil.—We are fully aware of the circumstances that caused the uproar at this institution last week; we were not, however, acquainted with the decision of the lecturers until we received our correspondent's communication. His remarks on it shall be inserted next week.

A Country Practitioner.—Dr. Williams has, since the cases reported of his in our Journal, treated several syphilitic cases successfully by the hydriodate of potass. He has at the present time in St. Thomas's Hospital several cases under its influence, and we have not the least doubt but it will be one of the most useful remedies ever discovered.

Our Edinburgh correspondent will hear from us by post.

A Constant Reader.—It is all puff.

X. O.—The verses received are not calculated for this Journal.

A London University Student.—The Clinical Lectures of Dr. Elliotson we shall insert after the termination of this volume; we shall also give the Clinical Lectures of Dr. Roots at St. Thomas's Hospital. The lectures to terminate Baron Dupuytren's course on Gun-Shot Wounds will be given in an extra sheet at the close of the present volume, so as to render each volume of this Journal as complete as possible.

E. W. D.—In Paris they are at present as badly off for subjects as we are; we should by all means recommend our correspondent to wait till next session. M. Orfila is at the present time doing every thing in his power to facilitate the study of Anatomy.

All Communications and Books for Review to be forwarded (free of expense) to the Publisher, 356, Strand, near King's College.

THE

London Medical and Surgical Journal.

No. 152. SATURDAY, DECEMBER 27, 1834. Vol. VI.

LECTURES ON THE THEORY AND PRACTICE OF MEDICINE,

BY WILLIAM STOKES, M.D.,

Delivered at the Medical School, Park Street, Dublin.—Session 1833-34.

LECTURE XLIV.

Gastro-enteric Symptoms in Typhus—Absence of Pain in Enteritis—Treatment of the Digestive Symptoms of Typhus—Tympanitis in Fever—Physiological Characters of the Digestive System—Conclusion of the Present Course.

Gentlemen,—To-day we have to consider the treatment of the gastric symptoms which occur during the course of typhus.

At our last meeting, I endeavoured to impress on your attention, that of all the lesions of typhus those which belong to the digestive system are the most remarkable, on account of their extent, variety, frequency of occurrence, and number of sympathetic relations; and that, consequently, this was, perhaps, the most important part of our analysis of the phenomena of typhus. I spoke of the theory of Broussais, and showed that many circumstances tended to render that theory at least exceedingly plausible; but that the progress of medicine had tended to shake the stability of the physiological doctrines as far as typhus is concerned, and to prove that, however extensive and frequent lesions of the intestinal canal may be, still they cannot by any means be looked upon as *the first link in the chain of morbid action*, nor typhus be considered as merely symptomatic of gastro-enteritis. If such were the fact, these lesions should exhibit an uniform constancy of occurrence, and their amount should be always proportioned to the severity of the symptoms. We cannot recognise either of these characters in typhus. The symptoms are very seldom in proportion to the gastro-enteric affections, and they are not of constant occurrence. Indeed, cases of typhus have been recorded by medical writers, in which the phenomena of gastro-enteric disease were totally absent. You will find several cases of this description mentioned by Bouillaud, Andral, and other practitioners of eminence; and even Louis, who says that the anatomical character of fever seems to consist in organic derangement of the mucous glands of the intestines, acknowledges that he has met with cases of typhus without any gastro-enteric lesion. We may then, I think, freely admit the conclusions which Andral has drawn from a most extensive analysis of the pathological characters of fever, that lesions of the digestive tube are not of constant occurrence, and that fever may exist independent of gastro-enteric disease; but, on the other hand, that in the majority of cases we meet with traces of more or less extensive derangement of the intestinal canal. If this be true, and I think there can be little doubt of it, it is quite sufficient to prove how important, how indispensable, must be the study of the digestive system in typhus. If you refer to the best practical treatises on fever published in this country, you will meet with innumerable instances of the remarkable prevalence of gastro-intestinal disease in typhus; and in France so constantly have inflammation and ulceration of the mucous glands of the ilium and other portions of the intestinal canal been discovered, that Andral, in his last edition of the *Clinique Medicale*, ranges fevers under the head of abdominal diseases. It is very probable that, in France, these secondary lesions are more frequently met with than in this country, and this I freely admit; but I can say that even here they are exceedingly common, and form a most important and prominent feature in the pathology of typhus.

I need not tell you that the part most commonly affected is the mucous expansion of the digestive tube. The stomach and the lower third of the ilium, particularly the latter, are most liable to disease, and it is here we generally look for organic alterations of the bowels in fever. We find many cases of typhus without any disease of the stomach, or with lesions of a very trifling nature; but this observation does not apply by any means in an equal degree to the small intestine. Again, the morbid appearances of the stomach in this disease have not in them anything special, or connected with the phenomena of typhus, and

they exhibit very little difference in persons who have died of typhus and those who have not; but in the small intestine there is, under the same circumstances, a very remarkable frequency and uniformity of lesion. Louis has stated it as his opinion, that the anatomical character of fever is inflammation of the intestinal mucous glands. Where gastro-enteric symptoms are present, we generally find on dissection that the mucous membrane, particularly of the lower third of the ilium, is in various states of disease. In some cases, the lesion is confined to the mucous membrane itself, which becomes softened and unusually vascular; but, in the majority of instances, you will find both the mucous membrane and glands affected. The solitary and aggregate glands become enlarged, and appear to be increased in number. This, however, is not the case. Under the influence of the inflammatory process they become hypertrophied, and, being thus rendered prominent and distinct, vast numbers of them are easily seen, which, in the natural state, would have escaped the eye of the closest observer. This disease sometimes appears to affect the glands primarily, and has been termed *exanthéme interne*, from its resemblance to small-pox. It commences with increased vascularity and turgescence, followed by softening and ulceration.

In the first accounts of this affection, it was supposed to be quite analogous to small-pox, and that the one was an eruption on the mucous surface of the bowels, as the other was an eruption on the skin. This opinion, however, has been disproved by the following facts:—In variola, we all know that there is a constant relation between the state of the cutaneous affection and the period of fever. There is no such thing as this in inflammation of the intestinal mucous glands. In some advanced cases of fever, we find the glands only in the first stage of inflammation; while, in other cases, where fever has been of very brief duration, we find them in the last or ulcerative stage of the disease. These facts tend to invalidate the notion of there being an analogy between this affection and small-pox, and shows that what has been looked upon as a pustular eruption affecting the surface of the intestinal tube, is nothing but an inflammatory state of its mucous glands, which may occur at any stage of typhus, and bears no relation to the particular period of fever.

With respect to the extent of this disease of the intestinal glands there is considerable variety. In some patients we find it very extensive, and forming a large sheet of ulceration; in others it is confined to a few small isolated patches. We may meet with it under its different phases of turgescence, softening, or ulceration; or we may have these three states co-existing in the same individual.

It may be asked here, if this ulceration of the glands be a common occurrence in fever, how is it that persons will recover? This is answered by the researches of pathological anatomy, which have shown that these ulcerations, even though numerous and extensive, are capable of taking on the process of cicatrization and cure. This fact has been established by the discovery of numerous cicatrizations in the situation of the glands of those persons who recovered from fever and died of some other disease. Under these circumstances we find the mucous membrane of the intestine presenting numerous minute patches, covered by a fine membrane destitute of villous processes, and resembling those cicatrices on the surface of the body, which point out the situation of portions of the skin which have been deprived of vitality.

When speaking on the subject of enteritis, I drew your attention to a valuable observation in Dr. Cheyne's report, that, in many cases of fever, what has been termed doubtful and imperfect convalescence depends on inflammation of the intestinal mucous glands. This leads us to the knowledge of a curious and important fact, namely, that a crisis may take place and fever subside, and yet the disease of the digestive tube may still go on, and even terminate in the destruction of life. Circumstances analogous to this have been also observed in other diseases, in which we find the local affection remaining after the subsidence of the fever by which it was accompanied, or preceded.

In speaking of enteritis, I drew your attention also to the occasional absence of all pain in cases where dissection proved the existence of extensive inflammation. This occurrence is still more remarkable in typhus. It has been often remarked, that idiopathic inflammation of the mucous glands is generally a painless and more or less latent affection. Now, if this be the case with idiopathic disease, how much greater will be the chances of latency and absence of pain in the glandular derangement which occurs in typhus, where the general sensibility is impaired, and where every form of local inflammation is remarkable for the trifling amount of suffering it produces, and the insidious latency of its origin and progress. And hence it is that extensive disease may arise and proceed unchecked in its career to a fatal termination, without ever attracting the notice of the physician, or eliciting a single expression of suffering, or even uneasiness, from the patient. But, gentlemen, the absence of pain is no proof of the non-existence of this treacherous malady. I have said before, and I now repeat the expression, that inflammation of the intestinal glands may exist in its most deadly form without any manifestation of pain or discomfort on the part of the patient, which would indicate where the evil lurks, and teach us where we should apply the resources of our art for its palliation, or removal.

You will ask me, is there any thing capable of furnishing us with means of detecting this insidious affection? There is. Sometimes we find a degree of tenderness on making firm pressure over the region of the ileum, but this,

is by no means of constant occurrence. But the most important aids towards forming a correct diagnosis are furnished by three symptoms most commonly found in connexion with these latent pathological changes. The first of these is great thirst without vomiting, and, generally speaking, a preference for warm drinks. The next is early tympanitis. The last is the occurrence of diarrhœa. These are the symptoms generally observed in cases where disease predominates in the small intestines. Thirst, with a preference for warm drinks, is a very common symptom of this affection, and the occurrence of early tympanitis is, generally speaking, an ordinary accompaniment, and tends to throw much light on the nature of the disease. With respect to diarrhœa, it may be stated, as a general proposition, that, in the course of typhus, diarrhœa, when not critical, is one of the most positive indications of an inflammatory condition of some portion of the digestive tube. In many cases diarrhœa does not appear until ulceration of the mucous membrane has taken place. Previous to the occurrence of ulceration we have an increase of fever with thirst, and perhaps some tenderness of the belly, and then diarrhœa sets in. There is nothing more common in hospital practice than to see a case of apparently simple essential fever going on without any particular abdominal symptom for ten or fifteen days, when it begins to change its character, diarrhœa sets in, and runs the patient down rapidly, and, on dissection, we find extensive ulceration of the small intestines.

I have told you that in cases of fever, where the digestive system is engaged, we very seldom meet with disease of the peritoneum, or other serous tissues. Still it is possible, and examples of it are occasionally observed. In some instances, where this inflammation of the mucous membrane and glands of the small intestines (or, as it has been termed, dothin-enteritis) existed, we have seen peritonitis coming on at an advanced period of the disease. Now, this may occur by the direct transmission, or extension, of disease from the mucous to the serous surface, or it may arise from ulceration producing perforation of the three coats of the intestine, and effusion of its contents into the cavity of the peritoneum. A case of this description is almost invariably fatal. Neither is this perforation of the intestine an accident of such rare occurrence as might be supposed. Indeed, when we consider the frequency of dothin-enteritis, we are rather inclined to wonder that it is not more common. This, however, seems to be explained by recollecting, that these ulcers almost invariably open on the mucous surface of the intestine and spread laterally; that they are generally superficial, and have very little tendency to pass deep into the wall of the intestinal canal. Still a patient in typhus, labouring under dothin-enteritis, is in a very bad and precarious condition. A man in fever, with prostration of strength, thirst, tympanitis, and diarrhœa, is always in danger; for he may in a moment be seized with alarming peritonitis, and sink in a few hours. Under these circumstances, you may be pretty sure that he has been carried off by peritoneal inflammation, and you may make the diagnosis of perforation of some part of the last twelve inches of the ileum. The truth and accuracy of this diagnosis we have confirmed in the Meath Hospital by numerous dissections. Its principle is founded on three circumstances;—the pre-existence of symptoms of disease of the mucous glands, the *sudden* supervention of symptoms of peritonitis without any thing to account for it, and the rapid sinking of the powers of life. I have made this diagnosis with success in ten cases, which occurred at the Meath Hospital, and in others in private practice. You will find a great deal of interesting matter on this subject in the Anatomico-Pathological Researches of Louis, who first made and established this diagnosis. I would also beg leave to refer you to my paper on Peritonitis, published in the London Cyclopædia of Practical Medicine.

We come now to the treatment of the digestive symptoms of typhus. We often find the patient complaining of thirst, with a desire in some cases for cold, in others for warm, drinks. As far as I have seen, the preference for cold drinks is most evident in cases where signs of irritation of the stomach exist, as tenderness of the epigastrium, nausea, and vomiting. One of the first observations I shall make on this subject is, that, in all cases where there is great thirst, you should be cautious in the administration of stimulants. The circumstance of intense thirst almost always points out the existence of irritation in the stomach or intestines, or both, and this should make you very cautious (particularly in the early period of fever) in giving any stimulant, whether in the way of medicine, food, or drink. If the thirst be great, and accompanied by vomiting, the best thing you can do is to apply leeches, and this you will find productive of very great relief, particularly where there is epigastric tenderness. You may allow the patient also to drink cold water *ad libitum*. Many persons are afraid of doing this, but it never does any harm, and is a great source of refreshment to the patient. We frequently give ice in cases of this description in the Meath Hospital. Against this practice, also, an outcry has been raised by some unthinking persons; they say cold water, and more particularly ice, must be injurious, because we know that under circumstances of fatigue, &c., their use has brought on a gastritis. This is a false argument. The circumstances are totally different, and the remedy in fever with gastric irritation has a wonderful value. If after the use of leeches, ice, and cold drinks, you find the disposition to vomit continuing, you will have recourse to the administration of opiates, and those best adapted for this purpose are the acetate or muriate of morphia, or

the black drop. In cases of obstinate vomiting, the application of a blister to the epigastrium, and the sprinkling the raw surface with a small quantity of the acetate of morphia will be found very useful. With respect to effervescing draughts, which are so commonly employed in cases of this description, I have already stated, when lecturing on gastritis, that their employment is very questionable, if not absolutely objectionable. They are very frequently rejected by the stomach, and the distension which is produced by the evolution of gas causes much distress and irritation.

Another symptom very often observed in connection with gastric derangement in fever is hiccup, a symptom of which, in the great majority of cases, we know very little. In the early period of fever, I have found it coexist with inflammation of the cardiac orifice of the stomach; in the advanced stage, as far as my experience of it goes, it seems to be more connected with general lesion of the nervous system. With these views, we may divide the treatment of hiccup into two parts; first, that which occurs in the early stage of fever, and, in the next place, that which comes on towards the close of the disease. In the former, we have found leeching, cold drinks, and abstinence, the best remedies; in the latter, antispasmodic and stimulant remedies appear to be more applicable. By reasoning, then, from experience, we find that hiccup in the beginning of fever demands local antiphlogistics, but in the latter periods, when there is profound adynamia, it may be treated with opiates, antispasmodics, and even stimulants.

A very common symptom in fever is tympanitis. Here again I beg to refer you to my lecture on enteritis, as all I have said there on this point is equally applicable to the present case. Tympanitis sometimes occurs at an early, sometimes at an advanced, period of the disease. It is a symptom which is very often badly treated. Many practitioners, the moment they recognise its existence, and without ever inquiring into its cause, prescribe at once their favourite nostrum turpentine, and bad consequences are too often the result. What generally takes place is this, that after the exhibition of turpentine the tympanitis disappears, but its removal is purchased at too dear a price. All the symptoms of fever, thirst, heat of skin, excitement of the vascular and nervous systems, are increased, and, what is still more annoying, the tympanitis returns and is as bad as ever. The rule by which you should guide your practice in the treatment of tympanitis is this, if it occurs at an early period, when the skin is hot, the pulse quick, and the strength undiminished, it is a sign of irritation or inflammation of the mucous membrane, and is to be met by appropriate treatment. Never employ stimulants for the removal of tympanitis occurring at an early period of fever. But in the advanced stage, where the general inflammatory symptoms have subsided, where the skin is cool, the pulse weak, and the strength reduced, then you may exhibit turpentine with decided advantage; but as long as the condition of the patient requires and admits of local antiphlogistic treatment, never have recourse to it.

Diarrhœa is another very common symptom in fever. I have told you before that diarrhœa, when not critical, may be looked upon as an unequivocal indication of disease of the mucous glands of the intestines. With respect to the period of its occurrence, we may have it either in the early or in the advanced stage of fever. When it makes its appearance at an early period of the disease it should not be too hastily interfered with; for great danger has been found to result from stopping it at this time by the exhibition of astringent medicines. Bear this in mind. It is a common practice with some persons to prescribe astringents the moment diarrhœa appears. Now, this is founded on false notions of pathology. In cases of inflammatory disease, one of the principal modes which nature adopts in giving relief is, by super-secretion from the affected organ. Now, if, under such circumstances, you arrest a diarrhœa of this kind occurring at an early period, you do it at the risk of producing intense enteritis or effusion into the peritoneum. When it comes on at an early period, all you should do is to apply a few leeches to the belly, and give small doses of hydrarg. c. cretâ with Dover's powder. You may also use mild anodyne injections; but in the treatment of this affection, always seek to arrest, not the disease but its cause. This is the true mode of proceeding.

In the advanced period of fever, where the pulse is small and low, and the strength sinking, diarrhœa is a very alarming symptom; for, if not speedily arrested, it will run the patient down in a very short time. Here, and here only, is the use of astringents demanded, and it is here that their beneficial effects are manifest. To arrest this dangerous symptom which is precipitating the case to a fatal termination, you must use opiates combined with astringents, and you may give wine if necessary.

From a consideration of the physiological characters of the digestive system, from the study of its pathological condition in fever, from a review of its form, structure, and functions, in health, and from the fact of its extraordinary liability to inflammation in fever, I think you will be prepared to admit, that the common practice of purging day after day, in typhus, must be productive of the worst consequences. I beg you will impress this firmly on your minds, for so universal has this practice been, that you will find it difficult not to be carried away by the tide of prejudice when you come to be engaged in the duties of your profession. A common practice has prevailed in these countries, and indeed still exists to a very great extent, of making the patient take purgative medicine every day, and this, I regret to say, is too often done even in cases

where the surface of the small intestine presents extensive patches of ulceration. Now, gentlemen, I will ask you, can anything be so barbarous as this, or can it be exceeded in folly and mischief by the grossest acts of quackery? Here we have an organ in a state of high irritation, and exhibiting a remarkable excitement of its circulation; and yet we proceed to apply stimulants to that organ, and to increase the existing irritation. Would it not be absurd, in a case of inflammation of the knee or elbow joint, to direct the patient to use constant exercise and motion? Would it not be very strange practice to apply irritants to a raw and excoriated surface? Yet something equally absurd and equally mischievous is done by those who employ violent purgatives in a case of inflammation of the digestive tube in fever. This has been the great blot in the history of British practice. Calomel and black bottle, and even jalap and aloes and scammony, have been prescribed for patients labouring under severe and extensive dothin-enteritis. Morbid stools are discharged, and the more morbid they are the more calomel and purgatives does the physician give to change their character, and bring them back to the standard of health. I want words to express the horrible consequences. Too often have I seen fever patients brought into the hospital with diarrhœa, hypercatharsis, and inflammation of the mucous membrane, from the use of purgatives administered before their admission. Practitioners will not open their eyes. They give purgatives day after day—a very easy practice, and one for which there are plenty of precedents—but it is fraught with the most dangerous consequences. I will freely admit, that the disciples of the school of Broussais have gone too far in decrying the use of laxatives altogether. But if they have lost hundreds by this error, British practitioners have killed thousands by an opposite plan of treatment. In cases of fever, where there is no decided symptom of gastro-enteric disease, there can be no objection to the use of laxatives if required, but they should always be of the mildest description. You will gain nothing by violent purging in fever. Mild laxatives alone can be employed; and where there is any sign of intestinal irritation present, even these should be used with caution. There is one mode of opening the bowels which you may always have recourse to with advantage in fever, viz., the use of enemata. There is not the slightest doubt that, occasionally, accumulations of fæcal matter will take place, and tend to keep up irritation, but they should always be removed with the least risk of producing bad consequences. To purge in fever, when intestinal irritation is present, is a practice opposed alike to theory and experience, and I have already stated that its results are most horrible.

It generally happens, that in cases of severe fever, even where symptoms of gastro-enteric disease are still present, that a period will arrive when the patient's strength must be supported by nutritious diet, wine, and other direct stimulants. Here the school of Broussais fell into a great practical error; their notion being that the fever was symptomatic of the gastro-enteritis, and not the gastro-enteritis of the fever, they followed a rigorous antiphlogistic plan of treatment *throughout the entire disease*, and thus many of their patients died, not of gastro-enteritis, but of the debility and exhaustion brought on by protracted starvation. You should bear this in mind, and recollect that, even in health, a man cannot exist beyond a certain period without some kind of solid and nutritious aliment. In Dr. Paris's work on Medical Jurisprudence, you will find an account of a nobleman, who starved himself to death, which took place about the twenty-first day. But how many fevers exceed this period? and can it be supposed that patients will survive or be able to wrestle successfully with disease, unless their strength be supported by a certain quantity of nutritious aliment? It is decidedly a bad and erroneous practice to confine patients for weeks to the *diête absolue*, to give them, in fact, scarcely anything but gum-water throughout the course of a long and exhausting disease. After the second week, you must look to the strength of your patient, and if you find this sinking, endeavour to support it by a mild nutritious diet, and if this will not be sufficient, you must have recourse to wine and stimulants. You may give nutriment and wine with advantage, even where you are still employing local antiphlogistic means, supporting the system generally, while you are using measures to effect the removal of local disease.

It would be impossible to lay down any rules with respect to the use of wine. Sometimes it will be required at an early, more generally at an advanced, period of the disease. You may, however, adopt this rule as applicable to the greater number of fever cases, that as long as the patient's strength and condition are such as to demand the use of antiphlogistic measures, you need not give wine. But when antiphlogistics are either no longer necessary, or when the patient's strength will hardly admit of them, when the pulse falls, and the skin loses its morbid heat, then you may give wine, and in such cases it very often produces the most remarkably favourable effects. It matters not how quick the pulse may be at this period, for one of the first effects of wine is to diminish its frequency, if it agrees with the patient. Here we arrive at a very important fact,—that recovery almost invariably takes place where the pulse falls after the use of wine, and this diminution in the frequency of the pulse not only affords good grounds for making a favourable prognosis, but also shows that we may persevere in the employment of wine with decided advantage.

I find I must conclude the present course to-day; the classes are breaking up, and

gentlemen are anxious to return to their homes. I feel certain that in these lectures many things have been imperfectly handled, and I know that many have been omitted altogether; but I knew this would be the case from the commencement, and that it could not be remedied. I thought, too, that it was much better to study a few subjects well than many superficially. I was convinced that the present mode of compressing into a limited course of lectures observations on all diseases, is a useless attempt, impracticable in its nature, and having a most injurious effect on medicine. This mode of teaching generates bad habits on the part of the teacher and the pupil; it makes the one satisfied with imparting, and the other satisfied with receiving, imperfect and limited information. It is better, I repeat, to know a few things intimately than many things superficially. If you examine the history of those men who have acquired the most brilliant reputations in the world of science, you will find that it was not so much by the universality of their information, as by their profound knowledge of a few important subjects.

In the present course of lectures, I have selected for my subject three great classes of disease, namely, those of the digestive, the respiratory, and the nervous systems, and, having done this, I have proceeded to the consideration of fever. On these important affections I have endeavoured to communicate as much knowledge as my brief and limited space would allow. I have not touched on hydrophobia, tetanus, hysteria, and some other nervous diseases of less interest; neither did my time permit me to direct your attention to derangements of the circulating system, or cutaneous complaints. Still I do not regret this, for I feel satisfied that I have done you more justice by pursuing this plan, than if I had taken a hurried and unsatisfactory sketch of the long list of human maladies.

It has been one of my principal objects in these lectures to avoid, as much as possible, taking up your time with literary disquisitions. I was anxious that every observation of mine should bear on some point of practical importance; I wished to communicate, as far as my information went, the true principles of treatment, and I shall deem my exertions more than repaid, if I have succeeded in impressing any one useful practical precept. The length of time necessary for giving a full course on the theory and practice of medicine should be much greater than it is at present. If spared by Providence to give another course of lectures, it would be my earnest desire to adopt, if possible, a different mode of lecturing, to commence the subject of theoretical and practical medicine, and continue it through two, or, perhaps, three sessions, and to give minute and comprehensive lectures on all or the great majority of subjects which the ordinary courses on medicine certainly cannot comprise. It is only in this way that the whole of our knowledge on the present state of medical science can be made available.

Gentlemen, I thank you unaffectedly and sincerely for your kind and unvarying attention, and wish you success in the honourable profession you have chosen.

LECTURES

ON

MIDWIFERY & THE DISEASES OF WOMEN AND CHILDREN,

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Delivered at St. Thomas's Hospital.

LECTURE XII.

Development of the Ovum—Fœtal Membranes—Placenta.

Gentlemen,—At my last lecture I described to you the changes which the uterus undergoes, in size, form, and structure, from the moment of conception to the full term of utero-gestation. I am very anxious that you should be well acquainted with these various changes, for they are of the utmost importance in a practical point of view. I will, therefore, commence the present lecture with a short recapitulation of them. (For this we must refer to the lecture of last week.)

Having considered the changes which the formative organs undergo after conception and during pregnancy, let us now examine the appearances which the germ of future development, the ovum, presents. The first commencement of the embryo is enveloped in impenetrable obscurity, and we are perfectly ignorant where the ovum undergoes the first steps of configuration. The earliest trace of the new being is the presence of that pulpy substance, which lines the cavity of the uterus immediately after conception, and which, as I have before described, seems to consist merely of coagulable lymph; this forms the external membrane of the ovum, the *membrana decidua of Hunter*, but which might be more correctly termed the maternal membrane of the ovum, in contradistinction to the *chorion* and *amnion*, which, as belonging peculiarly to the fœtus, have been termed the fœtal membranes.

The membrana decidua, which envelops the fœtal coverings of the ovum, viz. the chorion and amnion, is in contact with the chorion internally, while externally it is connected with the internal surface of the uterus. It is distinguished from the other membranes by being thicker and less transparent, by being much weaker, and having much the appearance of coagulable lymph, it resembles this also considerably in colour. It is not of an equal thickness, being considerably thicker in

the neighbourhood of the placenta than inferiorly. From its first commencement it becomes gradually thinner, so as at last to be scarcely half a line in thickness; in the earlier months its external surface is rough and flocculent, but afterwards it becomes smoother, as its internal surface was at an earlier period; it is also much more loosely connected with the uterus in the early months of pregnancy than afterwards, and this is one reason why premature expulsion of the fœtus is so much more liable to take place at this period than during the middle and latter part of gestation. When more or less distended it has a perforated, or cribriform, appearance. The preparation, which I here show you, is the membrana decidua, carefully separated from a three months' ovum, and distended with horse hair. You see its pulpy, coagulable lymph-like appearance; this membrane is vascular, receiving its blood-vessels from those of the uterus; these are mere prolongations of the uterine arteries, which enter its substance obliquely. The membrana decidua does not envelop the ovum with a single covering, but forms a double membrane upon it, somewhat after the manner of a serous membrane, nor can I at all agree with the view Dr. Robert Lee has lately taken of it; in fact, the descent of the ovum through the Fallopian tube is extremely similar to that of the testicle through the inguinal canal into the scrotum. The ovum pushes that portion of the decidua before it, which covers the uterine orifice of the Fallopian tube, and thus enters the cavity of the uterus, which is already lined with decidua, covered by the protruded portion which forms the decidua reflexa. (*Lithographic drawings, to illustrate this subject, were distributed to the Class.*) This reflexion of the decidua, which is reflected inwardly from above downwards, is connected on its internal surface with the chorion, externally it is unattached, while, on the other hand, the external layer is unconnected internally, and attached to the uterus externally.

The external layer of the decidua is called *decidua externa*, or *vera*.

The internal layer is called *decidua interna*, or *reflexa*.

The membrana decidua differs in its arrangement from that of a serous membrane inasmuch as it is not only reflected so as to become connected with the chorion, but at the point of reflexion it is continued over the chorion externally, where it forms the placenta, so that this membrane is enclosed in all directions by decidua; this latter portion, however, is not formed till about the middle of pregnancy.

The membrana decidua reflexa is extremely thin and cribriform, much thinner than the decidua externa, and becomes much more so as the ovum increases in size; from the same cause it is firmly pressed against the decidua externa, so that at last the two membranes become more or less united. The membrana decidua externa does not extend further than the os uteri internum, which is filled up by a plug of gelatinous substance; the reflexa of course crosses over the os uteri. According to John Hunter the decidua externa is continued some little way into the Fallopian tubes, more especially on that side where the corpus luteum has been formed, and, according to William Hunter, it is perforated at the two points, where the Fallopian tubes enter, as also where it corresponds to the os uteri; nevertheless this does not continue long, for, as J. Hunter remarks, the inferior opening, or os uteri, becomes closed in the first month; and, according to Lobstein's observations, the superior ones, or Fallopian tubes, after the second month.

Although Dr. William Hunter was the first who gave a complete description of the membrana decidua, still he cannot be considered as the discoverer of it, for Burton distinctly mentions it in his work, which was published in 1751. In speaking of the post mortem examination of a woman who had died undelivered at the full term of pregnancy, he says, —"Upon wiping the inside of the uterus very gently with a sponge, there seemed to be pieces of a very tender, thin, transparent membrane adhering to it in such parts of the uterus where the placenta did not stick to it; but, as the womb was somewhat corrupted, and the membrane so very tender, we could not raise any bulk of it so as to be certain what it was." The decidua, however, had been noticed even at an earlier period; I think it was by a French author, but the name has escaped my memory; I have a distant recollection that it was Peu, but am not certain. The use of the decidua seems chiefly to form the maternal part of the placenta, as I shall shortly explain to you; hence we find that, in all those quadrupeds where the maternal part of the placenta is permanently appended to the internal surface of the uterus, no decidua is found.

So much, gentlemen, for the maternal coverings of the ovum; let us now examine the fœtal membranes, properly so called. The parietes of the ovum consist of certain membranes which are essentially connected with the origin of the embryo; these are the *chorion* and *amnion*, besides which may be reckoned the *vesicula umbilicalis* and *allantois*.

The chorion is the proper covering of the ovum, for, literally speaking, it is the shell of the egg. It is a thin and transparent membrane; on both sides, but more especially on its external surface, it presents a ragged tufted appearance, being covered with groups of arborescent blood-vessels, which unite into trunks to form the umbilical vessels. According to Lobstein's observations, these vessels, during the very early periods of gestation, are merely veins. These loose tufts of venous radicles appear to absorb nourishment for the ovum much in the same manner as the roots of a plant. Although the chorion is so thin and transparent, it nevertheless

consists of two laminæ or plates, between which the trunks which produce this ragged appearance take their course. (*Several preparations of small ova, some injected and others not, were sent round.*) Although the chorion on its external surface is nothing but a vascular network of vessels, we have as yet been unable to detect any blood-vessels in its substance with any certainty. Most anatomists have asserted it nevertheless, and this opinion has been lately grounded on the known vascularity of the decidua, inasmuch as it is extremely probable that the vessels of the decidua penetrate into the chorion. Meckel also is of opinion that the vessels of the decidua have the same relation to those of the chorion, as the blood-vessels of the maternal part of the placenta have to those of the fœtal part; and when you understand the structure of the placenta, you will, I think, agree with me that this, in all probability, is the correct view. Neither nerves nor lymphatics have as yet been detected in the chorion.

This membrane undergoes various changes during the different periods of pregnancy, and forms a very important part of the physiology of utero-gestation. Its thickness, which in the earlier months of pregnancy is more considerable than afterwards, at this period is uniform in every part of the ovum; its external surface covered with those ragged vascular prolongations which I have already alluded to. In the second month of pregnancy these become longer and much more arborescent; after the third month a considerable proportion of them gradually disappears, generally speaking, from below upwards (*preparations of ova more advanced*), so that the greater part of its external surface becomes nearly smooth, except at that point where the umbilical cord is inserted; at this spot the vascular prolongations become more developed, and unite to form the umbilical vessels. This part of the chorion, together with the corresponding portion of the membrana decidua, forms a flat, circular mass, which, at the end of pregnancy, covers nearly one-third of the surface of the ovum,—I mean the placenta, or after-birth. At this point, the chorion, which forms its inner surface, is considerably thicker than elsewhere.

At the commencement of pregnancy, the chorion is but loosely connected with the decidua, but by degrees it becomes so closely united with it by fibres, which are the remains of the little vascular prolongations, especially where these two membranes combine to form the placenta, that in the latter months of pregnancy they can be scarcely, if at all, separated from each other. The early formation and relations of the chorion, in a physiological point of view, you will not be able to understand, until you are made acquainted with the minute structure of the placenta, and this is a subject which belongs to the first periods of fœtal development, I shall therefore pass on to the next membrane, viz. the *amnion*.

This is the inner membrane of the ovum; it is transparent, and of great tenuity; on its external surface it is loosely connected with the chorion, except where this membrane covers the internal surface of the placenta, where it is more firmly attached; its internal surface, which is in immediate contact with the liquor amnii, is very smooth, whereas externally, from being connected with the chorion by means of a fine layer of cellular tissue, its surface is not so smooth. During the first weeks of pregnancy, the chorion is usually, and perhaps always, more or less separated from the amnion, leaving a space between the two membranes, which is filled with a fluid, sometimes in considerable quantity, and known by the name of *liquor amnii spurius*, or false waters; strictly speaking, it is the *liquor allantoidis*, of which I shall speak when I come to the early development of the embryo.

According to John Hunter's observations, this fluid disappears in the second month, and the two membranes become very closely united; in other cases, as Lobstein remarks, they are found separate from each other in the third and fourth month, and this we also occasionally meet with even at the end of pregnancy. The amnion is reflected upon the umbilical cord at its insertion into the placenta, envelopes the umbilical vessels, the external covering of which it forms, and is continued to the anterior surface of the child's abdomen, passing into that projecting part of the skin which forms the future navel. Blood vessels and nerves have not as yet been discovered in the structure of the amnion, but it is very probable that the fine layer of cellular substance by which it is connected with the chorion is, as it were, a matrix in which minute vessels ramify to convey it nourishment. This membrane contains a fluid, known by the name of *liquor amnii*. In the earlier periods of pregnancy this fluid is nearly, if not quite, transparent; as pregnancy advances it becomes turbid, containing more or less distinctly of what appears to resemble mucus; it has a mawkish and slightly saline taste; its specific gravity is rather more than that of water; its relative and absolute quantity very considerably at different periods of pregnancy. Thus the relative weight of the liquor amnii to that of the fœtus is very considerable at the beginning of pregnancy; at the middle they are nearly equal, but, towards the end, the weight of fluid, in proportion to that of the child, diminishes considerably, so that during the last weeks of pregnancy it scarcely equals one pound, and seldom more than ℥viij., whereas the medium weight of the child is usually between six and seven pounds.

In the early months the absolute quantity increases, so that, between the third and fourth months, it may equal as much as ℥xxxvj.; chemically considered, it consists chiefly of water, a small quantity of albumen and gela-

tine, with a little muriate of soda and ammonia, and some phosphate of lime.

The source of the liquor amnii has been a subject of much controversy; some have considered it as furnished by the fœtus, others by the mother; hence those of the former opinion look upon it as an excretion, while the others have considered it as a secretion, destined for the nourishment of the fœtus; of the former opinion, some consider it to be the urine, others the cuticular excretion of the fœtus; the greater part of it seems in all probability to be secreted by the maternal vessels, although in the latter months of pregnancy it may be also in part an excretion. The opinion that it serves to nourish the fœtus is supported by the fact, that it contains more nutritious matter in the early than in the latter months of pregnancy, since at that time a considerable coagulation is produced by the action of alcohol. The disappearance of this coagulable matter of the liquor amnii towards the termination of pregnancy, may be attributed to its having been absorbed at an earlier period, and to the process of nutrition being now carried on by other means; it is also just as probable that the liquor amnii is absorbed by the skin of the fœtus. Meckel, who instituted some experiments for this purpose, found, on tying a ligature upon the limb of a fœtus, which was placed in liquor amnii, that the lymphatics of the skin swelled considerably, while those of the other limb, which was not tied, remained undistended. Cases have been recorded, where the fœtus has been born with the mouth closed and separated from the placenta, and where the extremities of the cord were rounded and closed. The liquor amnii has been found in the mouth, throat, and stomach of the fœtus, possessing its characteristic properties, and, from direct experiment, Meckel has proved that a fœtus already born may be nourished for several weeks by liquor amnii.

Besides being a source of nourishment to the fœtus, it serves many other useful purposes; it secures the fœtus against external pressure and violence, it supports the regular distension of the uterus; on the other hand, it diminishes the pressure of the fœtus against the uterus; during labour, by distending the membranes into an elastic cone, it materially assists to dilate the os uteri; it also serves to lubricate the external passages.

We now, gentlemen, come to the consideration of that vascular mass, which, as I before told you, when speaking of the chorion, was formed essentially by this membrane and the decidua, I mean *the placenta*, and, in commencing the subject, I regret it has so happened that I am unable to exhibit any fresh specimen before you, and must, therefore, content myself with the preparations which are upon the table; at my next lecture, I trust, I shall have a proper supply. The placenta is a flat, circular, cake-like mass, hence its peculiar name; it is soft and spongy to the feel, but becomes firmer as we approach its edge; it is the most vascular part of the ovum, and by which this is connected most intimately with the uterus; its longest diameter is generally about eight inches, its shortest about six; it is thickest at that spot where the umbilical cord is inserted; this is usually about the centre of the placenta, though not unfrequently we see it coming off from the edge; it varies here from three-quarters to an inch in thickness.

In primiparæ it is usually attached to the upper and back part of the uterus, a little to the right side, but why it should have this peculiar position is more than I can say; its inner surface is smooth, being covered by the chorion, which at this part is much thicker. The placenta cannot be distinguished from other parts of the ovum until the end of the first month; towards the end of the second month it covers nearly half the surface of the ovum, gradually diminishing in relative size, but increasing in thickness up to the full period of utero-gestation. It forms a spongy vascular mass, its uterine surface divided unequally into irregular lobes, which have been called *cotyledons*. The uterine surface of a full-grown placenta is covered by a pulpy membrane, resembling in structure the decidua which covers the chorion, and of which it seems to be a continuation. This is always found present at the end of pregnancy, it covers the lobes of the uterine surface of the placenta, descending into the sulci which run between them; in some parts it is thicker than in others, especially where it is connected with, or, in fact, becomes, the decidua of the chorion, or decidua reflexa. This membrane, which has been called the *placental decidua*, is pretty firmly attached to the vessels of the placenta, so as not to be separated without rupture, but by maceration its texture is more or less destroyed, so that then you may easily distinguish the extremities of these vessels.

The vessels which properly belong to the placental decidua are very numerous, and, like those of the decidua in other parts of the uterus, are supplied by the uterine vessels. Although this membrane usually dips down into the sulci which run between the lobes of the placenta, it not unfrequently passes on from one to the other, forming, as it were, a bridge, over what appears to be a clot of blood.

According to Lobstein's observations, although this membrane appears to be a continuation of the decidua which covers the chorion, it nevertheless does not exist during the earlier months. During the first months of pregnancy, the placenta does not present a solid mass, with its uterine surface covered with projecting lobuli, as it does at the full term of utero-gestation, but the vessels of which it is composed are loose and floating, as if it had been subjected to maceration. It has been supposed that this irregular lobulated appearance of the uterine surface of the placenta was produced at the moment of its separation from

the uterus during labour; this, however, is not the case, for Lobstein having opened the uterus of a woman who had died in the fifth month of pregnancy, and separated the placenta with great care, found these lobular prominences, although not yet covered by the membrane of which I have just spoken. Wrisberg, Professor of Anatomy at Gottingen, seemed to think that this membrane was distinct from the decidua reflexa, since with care the two membranes can be easily separated. The existence of the placental decidua was noticed so long ago as by Burton in 1751, who observes that "the side of the placenta next the womb is covered with a fine membranous continuation of the chorion." From these facts, gentlemen, it appears that during the early months of pregnancy the incipient placenta is in direct contact with the uterus, an arrangement which seems well adapted for allowing the venous radicles of the chorion to absorb that chylous fluid which is found in them at this period, and which is evidently intended for the nutrition of the fœtus. At my next lecture I shall continue this subject.

LECTURES
ON
FORENSIC MEDICINE,
DELIVERED BY
DR. HAY GRAHAM,
At the Westminster School of Medicine.

LECTURE XI.
Monstrous Births.

GENTLEMEN,—The third species of diplogenesis is, where the individuals are separated in the superior parts, and united in their inferior parts.

John Walter, of Berlin, gives a very minute account of a monster of this species, accompanied with excellent anatomical engravings. The following relation is remarkable for the sensations the mother experienced at the period of impregnation, as if the embryotic germs met with some obstruction in their descent, and the fusion or union took place at the very moment of conception.

"Anna Maria Wolbach, aged about 30, the wife of a countryman, was of a healthy robust constitution, and the mother of five sons and three daughters. Of the five sons two were twins, which she brought forth on the 12th of February, 1770.

"In 1773 she again became pregnant; and whilst in that state she did not remember having received any injury of the body or any strong impression on the mind, but complained of unusual pains and inconvenience; the abdomen was extremely distended from the pubis to the point of the sternum, swollen and stretched like a drum. At the time of impregnation she predicted that she should bear twins, which she thought would take place from that act; for when impregnated she felt a kind of contraction both above and below the umbilicus; that above began slowly, and drew itself slowly down like a heavy body; the other always occupying the same place below the umbilicus, and, towards the pubis, was quick and lively in its motion. At the expiration of nine months, on the 17th Sept., at six o'clock in the morning, she was taken in labour, accompanied with the most excruciating pains, and, at the expiration of two hours, brought forth a male child, which was healthy and robust, and is still alive. The labour being over, the midwife was astonished, on introducing her hand into the uterus, to find other heads presenting themselves, and that the placenta of the fœtus, already born, was connected with other fœtuses yet contained within the uterus. Frightened at this circumstance, and considering herself unequal to a labour so difficult and dangerous, she called in another midwife to her assistance, who had acquired a high degree of reputation for her skilful success in difficult cases. This one having examined the parts, and finding there were two heads, began to turn the fœtus, and endeavoured to deliver the monster by the feet, but was not able to succeed according to her wish. After having had recourse to various means, about three o'clock in the afternoon she delivered the woman of a double-bodied monster, with two heads, four arms, three feet, united by the breast and the pelvis, and which was born alive, notwithstanding the difficulty of the labour, but died almost immediately after birth."

In this case, as we perceive by the skeleton, the union had taken place by the sternum and pelvis, attended with a complete fusion or running into each other of the abdominal viscera.

St. Augustin makes mention of a child, born in his time, having all the parts of the belly upwards double, but from thence downwards single and simple; for it had two heads, four eyes, two breasts, four hands: in all the rest like to another child, and it lived a little while.

Cælius Rhodiginus saw two monsters in Italy, the one male and the other female, perfectly formed in every part except their heads, which were double; the male died within a few days after birth, but the female lived twenty-five years.

Lycosthenis mentions a very remarkable one—a female with two heads—who was exceedingly well made in her body; her two heads had the like desire to eat and drink, to sleep, to speak, and to do every thing; she begged from door to door, every one gave her freely. At length she was banished Bavaria, lest by looking upon her the imagination of women with child being greatly excited should make the like impression on the infants in their wombs.

Tulpius, in his Obs. Med., gives the engravings of two monsters of this variety. In the one we observe three legs and three arms,

the third leg and third arm having two hands and two feet, in which there is evidently a fusion of parts.

On examining the internal structure of the second specimen, the liver and gall-bladder were found double, the venæ portæ were so intricate and confused as not to admit of description; a double thorax contained two hearts included in the same pericardium; the lungs, also, were double; but there was only one spleen and one vulva.

In the History of Scotland, by the celebrated George Buchanan, tutor to our James I., we meet with the following singular account of monstrosity. "About the year 1490 there was born in Scotland a new kind of monster, the inferior part of his body resembled a male, in nothing differing from other men; but from the umbilicus upwards the trunk of the body and all the other members were double, and quite distinct both in their functions and in appearance. The king had great care taken in educating it, especially in music, in which it acquired great proficiency. It learnt different languages, and the two bodies were frequently at variance, manifesting different inclinations; sometimes they struggled with each other, and at other times consulted with each other. It was remarkable, that when anything hurt the inferior part, as the legs or the loins, each body sympathised and felt pain in common; but when the superior part was pricked or otherwise hurt, only that body suffered from pain. This difference was still more remarkable in death; for when one body had been dead several days before the other, the one which survived gradually wasted away, whilst its other half was in a state of putrefaction. This monster lived twenty-eight years, and died during the regency of John. We have written on this subject," observes Buchanan, "under the full persuasion of its truth; because there are still many respectable men alive who beheld it."—*Review of Scottish Hist., Geo. Buchanan*, p. 376.

This case, which is certainly the most singular of any upon record, seems to have escaped the observation of writers on this subject, and is only to be compared with the one mentioned by Ambrose Paré of the Bavarian beggar-woman.

The fourth species of diplogenesis is, where a fœtus is simple in its superior part, and double in its inferior parts. Ambrose Paré gives three drawings of this species of monster, and of one of which he possessed the skeleton.

The third class of monsters arising from defect or want of parts, called *agenesis*, is also numerous. This class includes all encephalous and other fœtuses, where there is such deficiency.

Such was the case of Sarah Beffin, who was born without arms, yet could thread a needle, sew, write, draw and paint with her lips; cut out watch papers with her toes, and use her feet as organs of prehension. Ambrose Paré mentions a similar case of a man, who, though he wanted his arms, could yet perform all those things which are usually done with the hands. He further reports having seen a boy nine years old, "who had but two fingers on his right hand; his arm was well proportioned from the top of his shoulder almost to his wrist, but from thence to his two fingers' ends it was very deformed. He also wanted his legs and thighs, although from the right buttock a certain imperfect figure, having only four toes, seemed to put itself forth; from the midst of the left buttock two toes sprung out, which were elongated, and of an unusual shape."

The fourth class, or *heterogenesis*, not only includes all those cases where the organs are reversed, as the heart to the right or the liver to the left side, but also many other cases of organic deviation from nature, such as extra-uterine conceptions, a plurality of fœtuses, albinos, and those who are attacked with the morbus cæruleus.

Those cases of monstrosity which proceed either from the growth of supernumerary parts, or from the defective development of parts, are said to depend on the *nisus formativus*, meaning that power by which matter is organised and developed. Thus the malformation may arise from the want of energy, or the feebleness of action, in the *nisus formativus*; the development of the organs becomes impeded or arrested, consequently they are either imperfect or absent. If, on the contrary, there is an excess of energy, there is a corresponding excess of development, and the organs increase either in size or in number beyond those bounds which nature usually assigns. Sometimes it may happen there is merely a perversion or misdirection of the *nisus formativus*, in which case corresponding changes may take place of greater or less importance, according to the direction or situation of the organs; as for example, in a general transmutation of the viscera, or certain varieties in the distribution or branching off of the arteries.

Whatever may be the nature or the number of organic malformations, yet it ought to be remarked, that even in these very *lusus naturæ*, where nature seems to sport with herself, and to cast from her the trammels of law and the regard of order, yet she invariably subjects herself to certain rules even in the midst of disorder and confusion. Thus, for example, the situation of the organs is never so transposed that the lungs are found in the cranium, or the brain in the pelvis. The organs are never so blended together or confused, as to interfere with their respective functions. The intestinal canals of the aorta never commingle or form but one tube; two livers may be blended together, but not so with the kidneys and liver. This would unquestionably happen if some laws did not preside over this apparent state of disorder. There is also another rule no less remarkable, that man

and other animals of a superior class may present in some of their organs such defective development as is exactly the usual state of other inferior animals; but in no case does the reverse take place, so that by the increased energy of the *vis formativa* a superior development ensues, corresponding with that of superior animals. Thus, for example, when the development of the human brain is arrested, it may be more or less exactly corresponding to the brain of a fish or of a reptile; but never does the simple brain of these animals arrive at the complicated degree of perfection of the human brain.

Many kinds of malformation may exist simultaneously in the same individual. Sometimes these malformations all belong to the same class, consisting either of defective or of excessive development, and sometimes they belong to different classes, thus assuming a complicated appearance.

These complicated monstrosities are the most common, resulting from the law expounded by Geoffroy St. Hilaire; according to which the exuberant nutrition of one organ necessarily induces a greater or less degree of *atrophy* of some other organ, and *vicê versâ*. Thus many individuals have one hand or foot with a supernumerary toe or finger, whilst the hand or the foot on the other side has one or more wanting. The left foot of a fœtus which had an umbilical hernia, had none but the great toe, whilst on the other foot there were eight toes, and the eighth was divided. The left hand of another fœtus, which had only one foot, bore two thumbs. Another fœtus which was presented to the Académie de Médecine, was without a thumb on the left hand, but had two on the right. In the same fœtus there were only eleven ribs on one side, but thirteen on the other. In a great number of cases, where some parts have been wanting, or where imperfectly developed, there have been found supernumerary fingers. Also if the brain is wanting, either entirely or in part, the face frequently acquires an unusual degree of development, being drawn out it more or less resembles the face of some animals; and where the heart and liver are wanting the kidneys become greatly increased in size. That monsters with two bodies are frequently acephalous or without heads, and bicephalous or two-headed monsters are often affected with spina bifida; and that in both these species many other organs are frequently observed to have been arrested in the development. These and many other arguments are brought forward in support of the theory of the ingenious, scientific, but somewhat speculative, Geoffroy de St. Hilaire.

Perhaps there may be some truth in this theory, but I cannot subscribe my belief that nature performs all her freaks by means of this power. Surely if such were the case, monsters ought to be of more frequent occurrence than they are; for if this "formative power" were either an excess or defect there should be a corresponding deficiency or exuberance of parts, besides the chances of all undue determination to some parts in preference to and at the expense of others, even when in the just mean. Thus, every weakly and every robust child, and many others, would present various appearances of monstrosity; and if the development of the fœtus were left to the blind caprice of this formative power" but very few perfect children would be born.

This *vis formativa*, or *nisus formativus*, are merely new names for the vital action of the embryo. As well may the seed, which is thrown on the soil, be said to have within it a *vis formativa* as the newly-begotten product of conception. The unassuming opinion of Richerand is the most simple and by far the most probable, that monstrosity proceeds from a mechanical cause, an accident of rare occurrence. The laws of nature are steady in operation, and, were it not so, all things would run into a state of chaotic confusion, and all distinction of animals would be speedily lost. Whatever may be the transcendant merits of the French authors, their numerous brilliant discoveries, their admirable descriptions, and their enthusiastic love of science, yet it must be confessed that their ardour sometimes leads astray their judgment, and that their fertile imaginations, quitting the beaten track of reason, are apt to expatiate in the fields of fancy.

That monsters are produced, frequently, by a faulty development is merely expressing the fact and not accounting for it; but that the cause resides within the *vis formativa* or principle of organisation, its too great activity, or its deficiency in action, is more than doubtful. That must be a violent effort and strange jump of this formative power—this principle of organisation—which, out of a single embryo, is capable of forming all the varieties of double-bodied monsters. Surely it is much more feasible to suppose them formed by the concretion of two embryos, and that the obliteration of some organs is the effect of the want of nourishment or the salutary effort of nature —her *vis medicatrix*—to correct that which is amiss. But it is useless and endless to enter into theories; I need merely observe, that none can stand unless strongly supported by facts, and that the facts ought never to be twisted in order to lend their support.

I shall now, gentlemen, conclude this lecture with a few general remarks. Female monsters are more common than male ones. Baron Haller relates, that, out of forty-two monsters with two heads or two bodies, thirty were females, nine males, two hermaphrodites, and one without any appearance of sex. Meckel gives a list of eighty monsters, of which sixty were female and only twenty males. This large proportion of female monsters arises, according to the opinions of some, from this cause, that the male organs of generation are merely the greater evolution, development, and extraversion of the female organs, therefore the

primitive sex is female; and that in the first formation of the fœtus, as in the lowest scale of animal life, there is only one sex, the female; and further, that in the majority of these cases, wherever may be the seat of monstrosity, the evolution of the organs of generation is arrested, and that, consequently, as every fœtus is originally female, it continues to remain such.

Bicephalous, or two-headed monsters with one body, are more frequent than monocephalous, or single-headed monsters with two bodies.

As it is not the object, in a course of lectures on Forensic Medicine, to enter fully into the medical and physical histories of the numerous subjects therein treated, so here there are many cases of monstrosity, or deviations from the usual laws of nature, which I shall pass over; as albinos, the morbus cæruleus, or the foramen ovale remaining open, horny excrescences of the body, the formation of scales or fish skin; also the deviation of the nervous system and its numerous varieties. I shall merely observe, that all cases of monstrosity proceed either from the undue development of the fœtus, or from the concretion of two fœtuses, and, in all probability, from a mechanical cause, or the effects of diseased action and the efforts of nature to remedy the defect, and not from any fault of the *nisus formativus*, or the principle of organisation. I may also observe, there is no authenticated case on record of a human mule, or a monster procreated by the unnatural connexion of a man or a woman with any other animal; and that such cases as you may have heard or read of to the contrary are not worthy of credit.

A CLINICAL LECTURE

DELIVERED BY

G. J. GUTHRIE, ESQ., F.R.S.,

At the Westminster Hospital, Saturday, Dec. 13th, 1834.

Injuries of the Head, and also of the Elbow Joint.

Gentlemen,—I spoke to you before of my patient with injury of the head, which was followed by maniacal symptoms; I shall not, therefore, allude to him to-day, but there are circumstances connected with the history of a case which has been recently under the care of Mr. W. B. Lynn, and which are worthy of your notice. The man, it seems, was knocked down and run over by a cab; he had his thigh broken, and also received some injury to the head; indeed, I make no doubt but that one wheel passed over the limb, the other over the head. He was brought in in a state of insensibility; but I wish to draw your attention to the simple fact, that the man died in convulsions. Where the patient has not been subject to fits previously to the injury, and this takes place, it is generally owing to a laceration of the brain, not a mere tearing, but a partial dissolution of the cerebral substances; and this was the fact in the present case on the left side, where the anterior inferior spine of the parietal bone joins with the sphenoid, just where the middle meningeal artery is passing through. This vessel was injured, but the hæmorrhage took place internal to the dura mater.

And now we will examine the symptoms which presented themselves. It does not appear that any paralysis manifested itself at any time, nor were the pupils dilated, although there was considerable compression exerted by the effused and coagulated blood; yet these symptoms are said to exist in such cases, nor was there any remarkable slowness of the pulse.

The question next arises, can any thing be done for such a case? It must be recollected that the spot where the injury was inflicted was not discovered during life, nor was there any particular symptom indicating the nature of the mischief. If a portion of the bone were removed, we should have had take place that which I have often described to you, namely, the dura mater would have risen up into the opening, and would not have afforded the usual indication; no pulsation could have been perceived in it. Well, the dura mater might have been opened, and the blood removed, but as it extended to the base of the brain, and this latter was itself injured, in all probability the patient would not have recovered.

This man had another injury; his thigh was broken, to which little attention was paid, all care being devoted to the head. A riding of the fractured portions had taken place, the lower one being drawn up about an inch and a half behind the upper, which was situated on the trochlea between the condyles. If the man had recovered, and union had taken place, the limb would have been shorter, and he would have been lame, being unable to bring his leg forward properly, and obliged to carry it round, like a man with a wooden leg. I saw a similar case within the last few days, the original accident having occurred in the East Indies.

There is another case which it is very necessary for you to attend to. An old man, of the name of Holmes, fell from a height of 23 feet, and dislocated his shoulder. This was reduced, but he had also broken off the olecranon process of the ulna, and the joint was opened into. Violent inflammation set in, and matter formed in various directions, to relieve which incisions were made. The man laboured for some time under great loss of power, with evident symptoms of depression of the nervous system, but he is now improving.

It became a question in this case, whether or not amputation should be performed. My desire to save the limb must have been quite plain to you all: he will have, I expect, a stiff joint. I have kept his arm straight, in order

to get the broken bones to unite, if possible; were the arm bent, the fractured extremities would unite only by ligament, and perhaps not at all. I have seen two cases of late which fully illustrate this point, and they are very curious ones.

The olecranon is liable to be fractured just where the triceps is inserted, and also below its attachment. When the bone is fractured about the insertion of the muscle, or where the capsular ligament is not much torn, separation of the fragments will not take place to any extent.

It usually occurs from falling on the elbow, and, in order to discover its existence, the fore-arm must be sharply flexed on the arm, and then brought suddenly back, when the fragments will be felt to grate, the motion of the limb will be almost perfect, and pressure on the olecranon from side to side is not always sufficient. The arm must be kept straight; if a mistake were made, and the arm bent, in nineteen cases out of twenty of injury to the elbow-joint, the twentieth being the fracture of the olecranon, the fragments will remain separated, and unite only by ligament. A gentleman whom I saw lately, had met with this accident, which had been mistaken, and the fore-arm kept flexed. The result was of very great inconvenience to him. When at dinner, he could raise his hand to his mouth with a bit of meat, but when he got it there, he could not take it away again; the action of the triceps extensor cubiti being lost, he was unable to extend his arm, consequently he was obliged, when he had placed a morsel of food in his mouth, to raise his left hand to the other, and push it away, when it fell down, and he could again take up a piece of food with precisely the same manœuvres. In shaving, also, he found himself unable to make the little touch which is necessary, and it became with him a very protracted business.

He was desirous of being relieved from this unpleasant condition, and I told him that I knew but of one way of doing it, which was, to make an incision, lay bare the extremities of the fractured portions, scrape them, bring them into apposition, and thus endeavour to obtain union. He did not like this, and I suppose went to some other surgeon, who told him that in all probability very severe inflammation would be the result.

The other case was not quite analogous to this: the gentleman had fallen, and had fractured the ulna just below the triangular space. He could not bend his arm, not on account of want of muscular power, but because the joint was stiff, and a portion of bone was projecting behind against the skin. Ligamentous union had taken place. I have no doubt that this projecting part of bone would file off, but, if not, it might be removed by the saw.

In all cases of fracture of the olecranon, whether at the upper or the lower part, or of the ulna, the arm must be kept straight, the action of the triceps above and the radius below will then tend to keep the fragments *in situ*.

In regard to the patient in the ward, he will have a stiff joint; and in all such cases it will be better to have the arm rather bent, as it will act as a kind of hook for him, and be far more serviceable than if it were straight. In the semi-bent position, therefore, it will be placed by and bye, but at present it is kept straight, with the view of causing union between the fractured extremities of the bone, if possible.

Review.

The Cyclopædia of Practical Medicine. Part XXIV.

The "History of Medicine," by Dr. Alison, on which we commented in our last number, contains almost all the truths and leading principles in medical science. We shall be excused, therefore, in culling largely from some of its most interesting points.

"Of those cases of visceral organic disease connected with dropsy, and often originating in inflammatory action, there is one, the frequency of which was not suspected, and the indications of which were not understood until very lately, namely, the granulated or tuberculated state of the secreting portion of the kidneys, first ascertained by Dr. Bright to be the almost inseparable concomitant of the albuminous state of the urine." The fact was noticed by Drs. Blackall and Wells; but albuminous urine, it is to be remembered, exists without any dropsical symptom.

Dr. Alison speaks of opium in inflammation in favourable terms. He agrees with Dr. Armstrong, that after free depletory measures have been resorted to, and when it would be unsafe to carry them further, and the disease be not yet arrested, opium is an admirable adjunct. The writer believes that opium, though it cannot diminish the quantity of blood in inflammatory affections, yet that it appears to enable the patient better to sustain the loss of blood.

When speaking of the advances which have been made in our knowledge of morbid anatomy during the past few years, he states, "Thus it is now well understood that in the very common disease of the arteries, which begins by deposition of lymph on their inner membrane, and generally goes on to ulceration and irregular bony depositions," resides naturally the great predisposing cause of many and very different diseases; "in the trunk and extremities it often leads to aneurism," and gangrenous inflammation; in the brain, to laceration of vessels, and consequently apoplexy and palsy; in the ascending part of the aorta and the semilunar valves, to angina pectoris, syncope, hypertrophy or dilatation of its walls.

It has been for a long period, and is even now, a current opinion, that chronic disease of the thoracic viscera is, in the majority of instances, a consequent on, or succeeds, abdominal disturbance; hence the "stomach cough" of the vulgar, and the conclusion of many pathologists, that in irritation of the alimentary mucous canal the bronchial lining sympathises, assumes a disordered action, and thus lays the foundation in numerous, if not in every instance, of phthisis pulmonalis. Dr. Alison does not subscribe to this generally recognised hypothesis, but believes the converse to be the case. He conceives that "when disease of the liver has been found connected with organic or habitual disease within the chest, it has been often supposed in this country, that the former has been the primary disease, but the present writer is quite satisfied that the statement of Andral, as to the pre-existence of the thoracic disease, in most such cases, and the mode of production of the liver disease, are very generally correct." Andral is undoubtedly one of the first, if not the first, pathologists of the present age, but, like other men, his imagination and his pre-conceived notions may occasionally lead him into errors even of the most extravagant kind. For there are few men who commence the investigation of a subject without the preconception of some particular view. It may be true that thoracic disease may precede that of abdominal, and that the converse proposition may be equally true, even without a paradox. The proximity of those organs, the very similarity of their offices, and the nervous chains by which they are united, must associate them in disease as well as in health, so that in disease one organ may act upon the other reciprocally. Any affection in the thorax that interrupts a free circulation through its cavity, or prevents a perfect arterialisation of the sanguineous fluid, must inevitably be an exciting, though not perhaps an immediate, cause of disorder in the liver, stomach, &c.; and, on the contrary, it must be as fully admitted that morbid changes in the liver, which disable that viscus from performing one of its most important functions, that of separating from the portal blood its carbonaceous and other effete materials, these very matters being themselves conveyed to the lungs, and circulating through its delicate machinery, will be a cause of disorder in the pulmonary organs. That morbid changes of structure may exist for an almost unlimited duration in some organs of the body, without materially impairing the powers of the general constitution, or without being participated in by other parts of the body, we possess numerous examples of; but such conditions can only be existent in parts that are low in their vitality, as the bones, &c., or their offices be limited, of little importance, or only required at definite periods, as in the mammæ, uterus, &c.

The subject of whether there be such agents as alteratives, deobstruents, &c., is ably discussed, and with the comments and observations of the author we strictly coincide.

"Many hopes have been entertained at different times, of the discovery of medicines possessed of a true and specific deobstruent or alterative character, but it must be admitted that these have been generally disappointed. At the same time, it is probably going too far to say, in the words of Sir Benjamin Brodie, when any texture of the body has been altered from its natural condition by disease, that that natural condition is never restored. We undoubtedly meet with cases where unexpected recovery from what appear to be the symptoms of unequivocal, although probably incipient organic disease of some of the internal viscera, takes place under the judicious use of mercury, or of the sulphureous and saline mineral waters, or of iodine; and we cannot regard the recommendation of these remedies, and the rules for their administration, contained in many recent works, as practically unimportant, nor doubt of the introduction of the last-named medicine, by Dr. Coindet, having been a real addition to the resources of medicine. But it must be admitted that the virtues of all these remedies have been much exaggerated by most of those who have undertaken to recommend them; that, in a great majority of cases, they are obviously quite inadequate to the object to be accomplished; that, when they have succeeded, the morbid structures which existed have probably approached more nearly than is usual to the effects of simple chronic inflammation, and been obviated in part by the repeated although cautious use of the ordinary remedies for inflammation; that some of these remedies have injurious effects on the body, which are often just objects of apprehension (of which mercury in scrofulous habits is the most important example), and that, in the present state of our knowledge, the discretion of the medical practitioner is very often most usefully exercised in withholding any such remedies, and confining himself to palliative treatment only, in cases which are truly beyond the reach of any alterative or deobstruent medicines yet known.

Important practical observations have been made by Sir Benjamin Brodie, and others, on the diagnosis of those organic diseases of more external parts, especially of bones and cartilages, in which the counter-irritation has proved most successful; but these are, perhaps, rather to be regarded as cases of chronic inflammation and its consequences than of strictly "perverted nutrition." "This is not the proper place to dwell on the surgical treatment of those organic alterations of texture which admit of relief from such means; but the great improvements in the treatment of aneurisms, of strictures of the urethra, of polypi of the uterus, and the use of various escharotics to destroy the surface of intractable ulcerations, as in the case of the arsenical solution applied to the hospital gangrene, of the nitric acid to phagedenic venereal sores,

of the lunar caustic to the more common syphilitic ulcers, even of different escharotics to incipient ulcerations of the os uteri, are all examples of the successful application of expedients of this kind, the proper use of which was formerly imperfectly understood."

With this somewhat long extract, we close our review of Dr. Alison's "History of Medicine." From the author's works on Physiology and Pathology, his Lectures on the Institutes of Medicine, but more especially the luminous clinics he delivers at the Edinburgh Infirmary, however high they may have raised his reputation, though it may not be enhanced by the present production, yet it certainly cannot be diminished.

FOREIGN MEDICAL LITERATURE.

Review of the Heidelberg and Strasbourg Museums.

Heidelberg Museum.—This Museum consists of two large rooms, one of which is dedicated to human, the other to comparative, anatomy. It has been much increased by the labours of Tiedemann, Fohmann, Arnold, and other distinguished men. In the first room we observed preparations of every organ in the human body in a healthy condition. Dissections of the eye, from the ciliary bulbs to the crystalline lens. Of the nerves and ganglions there are of each two preparations, one of which is dissected from without inwards, the other from within outwards. There are also some beautiful specimens showing the different situations of the different ganglions of the head, particularly the otic ganglion, or the ganglion of Arnold; uterine nerves, &c. Amongst numerous preparations of the injected lymphatics, there is a very pretty collection showing the different varieties in the thoracic canal, particularly of the superior part, before they terminate in the left subclavian vein. In the injections of the absorbent vessels of the mesentery, the mercury had passed into the ramifications of the vena porta in two Phocæ; we also observed it in many dogs, two human beings, and in a large tortoise (*testudo chyno*). All the injected intestinal lymphatics appeared to empty themselves into the spleen, which was covered by a mercurial net work. So much so as to corroborate the opinion of Tiedmann, that in it the chyme and the blood are assimilated. The Museum has also numerous arterial preparations, which are illustrated in the large work of Tiedemann's. The collection of pathological anatomy is very incomplete, which we are not surprised at in consequence of the smallness of the hospital.

Strasbourg Museum.—Within the last few years this Museum has been greatly increased by the industry of Professors Lobstein, Gustave, Alexander Lauth, Ehrmann, and Aronsohn. To give a slight idea of the labours of these men, it will suffice to state that from 1821 to 1825, in the space of five years, 910 pieces were added, and nearly 600 of which were pathological anatomy, and, doubtless, it is one of the best collections in Europe. The diseases are arranged in classes; muscular affections and diseases of bones are amongst them. The separate pieces are labelled, and many of them have copious notes of the disease and its progress. This Museum is so extensive, that we will limit ourselves to giving a short account of the most remarkable.

There is a sternum naturally bifurcated in its three superior fourths in such a way, that the sterno-clavicular articulations are at a distance of at least three inches and a half from each other.

A syphilitic carious state of nearly the whole of the cranium, and a portion of the face. The internal table of the cranium bone is rough and covered with small holes, at the bottom of which may be observed small globules of mercury.

An example of a fractured femur at its upper part, in which the inferior fragment has overlapped anteriorly the superior. The fracture is very oblique, and the limb shortened at least two inches.

In every fracture of the neck of the femur the neck has become horizontal. There are two cases in which the fracture took place at the junction of the neck with the head. Consolidation had not taken place; but, on the contrary, in two examples of fracture of the anatomical neck of the humerus, this phenomenon had taken place. Out of four broken tibiæ at their inferior third, one only was consolidated, so as to form an angle towards its anterior surface. Two fibulæ broken just above the external malleolus, the upper portion had projected outwards, and had united externally on an inferior fragment.

Arterial varieties.—We shall confine ourselves to the most interesting. The arch of the aorta bifurcating, and then uniting, so as to form a ring, containing the œsophagus and trachea. Only two examples of this description are on record; this one in the museum of Strasbourg has the date of the year 1777 upon it. Five examples of the left carotid artery, arising in a common trunk with the left subclavian; both carotids arising in a common trunk from the arch of the aorta; the left subclavian passing from the right; the right subclavian rising in an isolated manner about an inch below the left.

Both museums contain fifteen examples of varieties of the brachial artery. In all cases it is the radial artery which varies the least, and which is the proper continuation of the brachial. This has been stated to be in consequence of the radius being the most essential of the two bones, and the ulnar in the inferior classes of mammiferous animals altogether wanting. Out of these fifteen examples, then, we observe seven belonging to the ulnar artery,

four only to the radial; three times the bifurcation has taken place above the condyles of the humerus, and then we may admit that it is the cubital which is sent off too high. There is only one example in which the interosseous artery arises from the brachial at its junction with the coraco-brachialis muscle.

There are two cases of invagination, too curious to be passed over in silence. In one the termination of the ileum, the ileo-cæcal valve, the transverse colon, and a portion of the left portion of the colon, are invaginated into the rectum, so that the cæcum and vermiform process give a sensation per anum of a polypus growing from the inner surface of the intestine. The other was a labouring man, thirty years of age, who suffered from all the symptoms of ileus. In this case the small intestine, to the extent of three feet, was returned; it was black, the mesentery white, but not in a state of gangrene; between the two folds of mesentery there was neither lymphatic glands nor vessels, but merely filaments, or traces of those which were obliterated. Four months afterwards he was completely restored to health. At this time he eat some cherries, and swallowed the stones; perforation of the intestine took place, and he suddenly died.

Amongst the anomalies of the genital organs of females, from a simple natural uterus to cases in which a medium partition separated the whole of the parts into two symmetrical halves. In one woman, the appearance of which was that of a man, no development of breasts; had never any children; the large and small labia were but just apparent; the vaginal parietes very thin, terminating superiorly by a flat ligament, which represented a bifurcated uterus, having attached to it other flat ligaments, but there was not the slightest trace of an ovary.

We will here terminate, by quoting two preparations, to which some history is attached. The first is a lobe of the lung, the bronchiæ of which have been injected with mercury, and the arteries with cinnabar by M. Reiseisen. In it we may evidently perceive the bronchial tubes, terminating similar to a bunch of grapes, but without enlarging, whilst the vessels ramify on their surface. The other is the femur of an infant, injected by Ruisch, in which it is demonstrated, that the nourishing arteries are distributed to the marrow of the bone, and its envelopes, whilst the bone is nourished by arteries which traverse the periosteum.

Physiological and Therapeutical Researches on the Effects of Compression and Rarefaction of the Atmosphere, both on the Body and isolated Limbs. Extracts from a Memoir read at the Academy of Sciences, 1834. By V. T. Junod, D.M. Member of the Clinical and Physical Society of France, &c.

The influence of the different pressures of the atmosphere over the animal economy has for many ages been well known, and the therapeutical effects that may be derived from it, we doubt not will be of much value. The different apparatus invented by M. Junod to bring them into use are deserving of the greatest praise. We shall extract a great part of his paper, and do so with pleasure, as we are sure it will be interesting to our readers. The cases which he has recorded are extremely interesting, and show the powers of this new instrument in controlling disease. Its effects in lessening the tetanic symptoms were remarkable.—Would it not be worth a trial in hydrophobia?

Having an opportunity at the commencement of my medical career of making various tours, I was struck with the different impressions made on my body at different heights in the atmosphere. When at the top, in particular, of the Alps, of the Pyrenees, and of Mount Ætna, the effects produced on my organisation were so great, that it has since caused me serious reflections and continued researches.

The many opportunities that I have since had of studying diseases and their therapeutical agents, have caused me to apply myself to those, the action of which were most constant and the least contractible. The external application of revulsives and derivatives have particularly fixed my attention, in consequence of the success that in general accompanies their use. From this I was naturally led to believe that a practical application of rarefaction and compression of the atmosphere, either on the surface of the body or individual members, would become one of the most powerful aids in therapeutics. My experiments on this subject have also in fact proved to me, that, by thus varying the weight of the atmosphere, we might obtain a *mechanic* derivation, whilst in vain we might exert therapeutical means based on the physiology of organs. The instruments that I submit for examination to the Academy produce this derivation with the greatest facility, either by applying liquids on the spot of their application, or by touching them with the liquid.

Description of the Apparatus to perform Compression or Rarefaction of the Air, particularly on the surface of the Body.—This receiver is made of copper, of a spherical form; its diameter is from the fourth of a metre to a decimetre; its walls externally are strengthened by circles of iron, to which there is fixed a seat which can at pleasure be elevated or depressed, and on which the person submitted to the experiment sits. Light penetrates the receiver by two crystalline lenses which are fixed in its walls. The entrance of the apparatus is circular, situated on the upper part of it, and may be hermetically closed, by means of a cover, which forms the segment of a sphere, and which in fact closes the opening similar to a porridge-pot. This cover has three

bores in it. One of these are to communicate the reservoir of a thermometer with the interior of the apparatus; in another may be placed a barometer or a manometer; and, lastly, in the third, a cock, so as to permit a necessary escape for the continual reviving of the internal air.

The modification for the density of the atmosphere is caused by means of a suction and forcing pump, which is placed in communication with the sphere by means of a tube. The two bodies of this pump should have each a capacity of at least a cubical decimetre. Thus, when a person is situated in the interior, and the apparatus is hermetically closed, the natural pressure of the atmosphere is increased or diminished with the greatest facility, and the barometrical cylinder indicates the different degrees of pressure. The experiment may thus be prolonged for an indefinite period, the air contained in the interior being continually renewed, by allowing the air in the interior to escape by means of the cock placed at the superior part.

Phenomena resulting from the Compression of the Air on the Human Body.—When the normal pressure of the atmosphere is increased to half on the human frame placed in the interior of the receiver, the following are the phenomena which may be observed:—

1st. The membrane of the tympanum pressed towards the internal ear becomes the seat of immense pressure. As the equilibrium is established, this unpleasantness by degrees is dissipated.

2nd. Respiration is carried on with renewed facility, the capacity of the lungs appears increased, inspirations are longer, but less frequent; in the course of ten minutes the patient finds within the thorax an agreeable sensation of heat; it appears as if the pulmonary areola, which, for a long time became foreign to the contact of air, became again re-dilated for its reception, and the whole of the economy with each respiration receives an increase of power.

3rd. An increase of the density of the atmosphere appears to modify in a notable manner the circulation; the pulse becomes more frequent, fuller, and is with difficulty compressed; the calibres of the superficial venous vessels diminish, and occasionally even completely disappear, as if the blood in its return to the heart was confined to the deep veins. If the calibres of the superficial veins increase or diminish in consequence of the tension of the atmospheric elasticity, the same should take place in the pulmonary organs, which are placed in fact under the same circumstances; therefore, it ought necessarily to result, that the pressure of the atmosphere being increased, the pulmonary venous circulation should diminish, and doubtless a much greater quantity of air is admitted into the lungs on each inspiration, than under a normal pressure of the atmosphere. If the increased density of the air diminishes the calibres of the venous vessels, it must necessarily result, that the blood is carried in a larger quantity in the arterial system, as well as to the principal nervous centre, particularly in the brain, which is kept from all immediate pressure of the atmosphere by the resistance of the osseous box which envelopes it. The encephalic functions are also stimulated, the imagination is quick, the thoughts are gifted with peculiar charms, and even in some persons symptoms of ebriety supervene. This increase of innervation acts equally also on the muscular system, the movements are easy, and even more certain than natural.

4th. The digestive functions are more active; thirst entirely disappears.

5th. The salivary glands and kidneys are excited, their secretion being very abundant, and this effect takes place on the whole glandular system.

6th. The weight of the body appears to diminish in a very sensible manner.

The Physiological Phenomena produced by Rarefaction of the Air from the whole Surface of the Body.—When a person enters the receiver, and a fourth of the natural atmospheric air is diminished, the following are the phenomena observed:—

1st. The membrane of the tympanum is distended, and the sensation produced is analogous to that caused by compression. When the equilibrium is re-established, the sensation is immediately dissipated.

2nd. Respiration is laborious, inspirations are short and frequent; in the course of fifteen or twenty minutes this difficulty of respiration is succeeded by true dyspnœa.

3rd. The pulse is full, depressible, and frequent; all the superficial vessels are in a manifest state of turgescence. The eyelids and lips are in a state of distension; hæmorrhage frequently supervenes and produces syncope; the skin is hot, and its functions are extremely active.

The slight activity of hæmatosis, the greater or less expansion of gas which circulates with the blood, the superabundance of this liquid in the different orders of superficial vessels, sufficiently explain the defect of innervation, which is characterised by the want of energy, and by a complete state of apathy.

The salivary glands and kidneys, which secreted an abundance of fluid under a greater density of atmosphere, present now an effect entirely opposite.

If there is an alternation of compression and rarefaction of the atmosphere, the effects produced by these two opposite operations become then very sensible.

Description of an Apparatus for Increasing or Diminishing the Density of the Atmosphere on one or more of the Limbs.—This apparatus consists of four glass or copper tubes, in each of which one of the limbs must be

placed; thus it has an hermetical envelope of a sufficient solidity to resist the pressure of the atmosphere. One extremity of these tubes is closed, the other is open. The open extremity is so destined, that its entrance may be modified according to the volume of the limb which is to enter it.

These pieces of rechange, as they may be called, are four in number for each tube. They represent a long hollow tube of different diameters, which exactly embrace the limb at the superior part, and, when compression or rarefaction is performed, they are prevented from falling, and they also prevent the re-entrance of gaseous fluids.

2nd. This compression or rarefaction of the atmosphere is made by means of a suction or forcing pump, provided with a recipient, or reservoir, containing a manometer, and four *robinets* (taps). The pump is united to the receiver by one or other of its prolongations, communicating by the different valves of this instrument.

3rd. Four elastic tubes, which are to establish the necessary communication between the pump and the cylinders.

The manner of performing the Operation of Compression.—The atmospheric compression is rarely necessary on many limbs at a time, and it is more particularly on the inferior extremities that it is practised.

To do this, the pieces of rechange are fixed to the end of the tube, in proportion to the volume of the limb. This being done, the extremities are engaged in the cylinders, the pieces of rechange embrace them at their superior part in a circular manner, so as to prevent the escape of the air. The pump is then put in activity, and the compression is greater or less, according to the emergency of the case.

A Vacuum.—To form a vacuum it is sufficient to unite the pump with its reservoir, also with its prolongations destined for this purpose. This change is performed in a few seconds. The mercury is seen to rise in the tube of the manometer, and it may be obtained to the height of ten centimetres, without the patient finding any inconvenience, and it is seldom we meet with a case, in which the suction by vacuum should be carried further.

The operation may last only a few minutes, or it may be necessary to prolong it for many hours, this depends entirely upon the symptoms of the case. In such cases it is best to re-establish an equilibrium of air in each tube for the space of ten minutes. This will allow a renewing of the fluids, which the suction had brought into the limbs. To hasten this a momentary compression might be performed.

Phenomena arising from the Compression of the Limbs.—If the natural atmospheric weight is increased half on a limb, the following are the phenomena produced:—

1st. The skin is pale; the superficial veins disappear; the limb decreases in size; and the circulation suspends its course to a greater or less extent.

2nd. After the operation the limb appears sensibly much lighter, its movements are made with greater facility, and at the same time, as it were, more certain.

3rd. If this compression, by means of cold water, was performed, the effects are the same, but are more slow.

Phenomena arising from a Vacuum on the Limbs.—When the atmospheric pressure is diminished one-ninth on the limbs, the following phenomena take place:—

1st. The skin becomes tense and of a livid colour; in the course of a few minutes the limb increases in size; the fluids run from the centre to the periphery, and the skin becomes of an unaccustomed warmth, which equals the temperature of the deep tissues.

2nd. The functions of the skin are rendered more active, profuse transpiration is established; the secreted fluids are rendered into vapour, which is condensed on the walls of the cylinder.

3rd. After the operation, the patient complains of a numbness in the limb, which, however, in a short time is dissipated.

If the vacuum is increased by the use of hot vapours, the effects are the same, with the exception of slight increase of activity.

General Phenomena.—1st. When the vacuum is performed on the limbs the head becomes lighter, the face pallid, the pulses of the frontal and temporal branches become thready, and, in some cases, cease altogether, there is then a tendency to syncope.

2nd. Respiration is more simple.

3rd. The functions of digestion become less active, and a sensation of nausea is produced.

4th. Towards the termination of the operation the transpiration, which at first is only observed in the interior of the tubes, becomes general.

5th. If, simultaneously, the operation of compression is performed on the opposed limb, these general effects cease to take place.

Observation I.—*Traumatic Tetanus, with a remarkable "lentissement" of the Respiration and Circulation.*—A young man, scarcely 20 years of age, a carpenter, was brought, the 28th of October, 1832, into the Civil Hospital of Strasbourg. He stated that he fell down, and the whole weight of his body, for a short time, was supported by his hypogastric region, upon which he fell; he immediately, in this part, felt an acute pain, after which he remained in a state of stupor. Four hours afterwards he somewhat recovered, the local pain remained, and it was accompanied with hæmaturia. He was put under the treatment of antiphlogistics; he appeared getting quite well, when suddenly, on the 2nd of November,

he was taken with extreme difficulty of breathing; this was, however, immediately lessened by bleeding. For the following eight days these symptoms frequently returned, and were, in general, combated by large bleedings, performed during the accession. All other means that, up to this time, were adopted proved useless. The patient became in a complete state of anæmia: the bleeding was now obliged to be renounced. From this time the following are the symptoms which took place:

12th. Towards three o'clock in the afternoon the respiration was again embarrassed; in about fifteen minutes afterwards inspirations were made at long intervals, and this was soon followed by a loss of all knowledge. The circulation, however, continued, the pulse was pretty good, but only 45 in a minute. After remaining for about twenty minutes in a state of apparent death, the muscles of the back contracted, and continued with increased force, the whole weight of the body, in a short time, resting on the sinciput and heels. The arms soon were thrown backwards to maintain an equilibrium.

To this opisthotonos, which had remained for ten minutes, succeeded speedily an emprosthotonos, and these two phenomena alternated many times in the space of a few seconds. The patient after this fell into a state of lethargy, and a new series of tetanic phenomena manifested themselves. Finally, after an hour and a half's continuance he again returned to himself. When I first saw the patient, adds M. Junod, the accessions had been renewed for the space of fifty days, and always at five o'clock in the afternoon.

Every thing that art could suggest had been tried and proved unsuccessful. I now proposed the employment of my instrument, as I believed it might prove efficacious in this dreadful disease.

On the 18th of December his extremities were placed in the cylinders, the vacuum was made at ten centimetres; and, under the influence of this apparatus, all the primary symptoms of the accession disappeared, though it had manifested itself previous to their application. I prolonged the use of it till six o'clock. The next day the same treatment was followed, and crowned with success.

The 20th of Dec. I obtained the same result, continually the accession took place on the following day, but not at the accustomed hour, and this lasted for many days; the accessions, however, were much less violent, became at length quite irregular, and at length, by perseverance in this treatment, he became radically cured, and left the hospital.

Observation II.—*Paraplegia with complete loss of Sensibility - Cure.*—M. V., a bookbinder, 40 years of age, who had enjoyed excellent health. From the events of July, he lost all his property, from which time he became extremely melancholy. He had now suffered for some time from much debility in the limbs, this became succeeded by an attack of lumbago, which caused him to suspend his daily occupation.

On the 6th of July, 1833, he was attacked with the vomiting of bilious matter, which continued for twenty-four hours, at the same time he became attacked with paraplegia, and a total loss of sensibility. In this case also the most speedy treatment was had recourse to, internal and external remedies were both applied, without affording the least amelioration. Five months after he was thus attacked, I was called to see him. I now observed the symptoms, as described above, and the patient was also suffering from quotidian fever, the paroxysms having returned for two months. All the viscera appeared healthy, with the exception of the rectum and bladder, and these were in a state of paralysis. He had a continued sensation of coldness in his extremities, and he had a large wound on the lower part of his back.

On the 2nd of October I employed my apparatus, with the intention of increasing the circulation and functions in the paralysed limbs, or to produce a powerful derivation, in case of there existing any lesion of the spinal marrow. About two o'clock in the afternoon we had placed his extremities in the cylinders, and about every fifteen minutes we alternated the action of a vacuum and that of vapour. The vacuum was made at eight centimetres, and the temperature was maintained at thirty degrees of centigrade. The operation lasted for an hour and a half; nothing remarkable took place, but a powerful derivation was produced, and he had some tendency to syncope. From this time the patient felt throughout the whole of his paralysed limbs a natural heat, with a peculiar pricking sensation, and in the following evening motion returned in his right leg.

On the 3rd, the same treatment was followed with much more marked success; sensibility had become perfect to the knee-joint.

On the 4th, the left thigh, which to this time had remained insensible and motionless, could now, at the patient's will, be moved about to a certain extent in every direction.

On the 5th I was obliged to quit Paris on business, and did not return for some days, during which time the treatment was suspended. On my return, which was on the 9th, the patient had lost all the benefit he had received. The same treatment was again immediately adopted, and the patient at once regained the same powers he had before I left the capital. In the course of twenty days from this time the patient had recovered all sensibility and motion; the treatment had been adopted every day. It is true, at first he found some difficulty in walking, but in the course of a little time he was able to return to his work, and has not since had a relapse.

Observation III. — *Hydrothorax.* — M. A——, 48 years of age, a banking clerk, of good constitution. On the 15th of Nov. he suddenly became attacked with great difficulty in respiration, which increased so rapidly that he was fearful of suffocation. A medical man was immediately called, who bled him largely and applied sinapisms over his chest, which speedily relieved him, and in a few days he was able to continue his usual employment. About three weeks afterwards the same symptoms again supervened, and the same means again combated them. From these two profuse bleedings, in so short a space of time, he became in a very debilitated state, from which he very slowly recovered.

On the 20th of December the same dyspnœa occurred; he suffered about four hours before I saw him. On my arrival I found him lying upon his back, his chest was uncovered, and slightly raised by pillows; there was great anxiety of countenance; pulse not perceptible at the wrist; and his heart laboured irregularly and with difficulty. A vein in the arm was again opened without procuring any blood, sinapisms were applied to the lower extremities, and cupping-glasses used on the upper part of the chest. These means, from the violence of the disease, I deemed insufficient; I therefore placed the arm on which phlebotomy had been practised into one of my pneumatic cylinders. The air had scarcely been rarefied to eight centimetres before the blood issued from the vein in a full stream; the patient soon became easier, the dyspnœa continued though not so urgent. About four o'clock the next day it returned with renewed violence; I was now afraid to deplete further, but limited myself to the application of revulsives by means of my cylinders. The arms and legs were immediately enveloped with them, the air rarefied, and the patient instantly became better. After they had been applied about twenty minutes they were removed, and the symptoms soon returned. The dyspnœa was constant; in a few days it became more urgent, the cylinders had been frequently applied, and their use was always followed by palliation. His respiration, however, became more and more intense; there was a dead sound emitted on both sides of his chest from percussion, and the sibilous *râle* heard throughout the lungs. He now expectorated bloody mucus, the action of his heart was slow and laborious, and on the 28th he died.

Autopsy. — There was effusion in both pleuræ; the heart was slightly hypertrophied; aortic valves, and also a portion of the arch of the aorta studded with ossified patches; the lungs, &c. healthy.

Observation IV.—*Chronic affection, with acute pains in the Abdomen, suddenly cured.* —Madame C——, 47 years of age, of a sanguineous temperament, had been dining out, and on her return home was attacked with cholera. She was extremely alarmed, her head became giddy, had dizziness of the eyes, tinkling of the ears, with violent relaxation of the bowels, accompanied with acute colicky pains. On my arrival I immediately placed her extremities under the influence of rarefaction of air; the vacuum was made to eight centimetres, and in a moment the acute pains which returned at intervals ceased; at the same time, also, the symptoms of her head, which she had suffered from, disappeared. Nevertheless, the application of the instrument was continued for forty-five minutes (ice placed in the interior of it, and her spine was fomented with warm sand). On the following day she complained of debility, and there was some anxiety of countenance. Slight diarrhœa; alvine dejections liquid, and white; no pains in the abdomen. She continued thus gradually to improve, and in a short time was completely restored to health.

THE CONVERT AND THE MEDICAL GAZETTE.

To the Editors of the London Medical and Surgical Journal.

Gentlemen,—As I observe, in the *Medical Gazette*, a "Convert" to disinterested opinion, who writes some observations upon the expressions of Dr. Elliotson in the London University, as compared with those he uttered while lecturing at St. Thomas's Hospital, I beg to state the matter in its true light; although, in the first instance, I feel compelled to give this half-candid and *altogether* wonderful convert his due credit for that obtuseness of mind of which he, as it were, instinctively complains. Now, this rara avis of disinterested memory says it has *reached his ears* that Dr. Elliotson has, since he became Physician to the North London Hospital, arrived at the conclusion, "that it is only in small hospitals containing from forty to eighty beds (he says nothing of patients) that a pupil can hope to attain any real knowledge of his profession," an assertion of the learned Professor's, which, *if uttered by him*, would not be much less wonderful than the conversion of this disinterested *earwigger*. Now, for his illumination, as well as to do justice to the pure fame of the professor, I shall beg leave to relate his words as he spoke them, taking care, as I would advise the gentleman with the ears to do, nought to extenuate, nor aught set down in malice. The Doctor, then, said—"that a small hospital might suffice for the purposes of clinical instruction, but he could not go so far as to say that it possessed *all* the advantages which a larger one might offer, on account of the more numerous operations which were performed in the latter, as well as the complicated and curious cases which were sometimes sent to them from the country." He added, however, "as his fervent hope, that the day was not far

distant when the North London Hospital might compete with any of its more extensive neighbours." The Convert seems to gather from this (whether from his sharp ears or obtuse brains matters not) that there is some quackery in the wind, and accordingly writes post haste to the Editor of your chlorotic coloured contemporary, ycleped the *Medical Gazette*, (and who, *en passant*, heads, or rather beheads, his own special offspring, termed leaders, with an ever during and threadbare motto,—threadbare because he has worn it so long, and wrested it to usages which his "licet omnibus, &c. &c.," would not exactly authorise,) that there is some screw loose.

With regard to the sneers with which the green covered gentleman treats the motives of those professors who have accepted office in this institution, they might be passed over without remark, or only answered with a sneer, perhaps not quite so green coloured as his own; but truth requires it should be told, that Dr. Elliotson, for one, has sacrificed, by becoming Clinical Professor in this establishment, pecuniary emolument to a *very* considerable amount. Your allowing this a place in your well conducted Journal will much oblige,

Your's obediently,
A Student of the North London Hospital.

Sept. 23*rd*, 1834.

THE
London Medical and Surgical Journal.
Saturday, December 27, 1834.

REFORM.

Spontaneous Reform is now the order of the day, and this of course implies the conservation of our several institutions. We may, therefore, look forward to some changes in the gloomy mansions of Pall Mall, and in the now dilapidated edifice of Lincoln's Inn Fields, and possibly, also, in Rhubarb Hall. The hope, which some of our radical alchemists of the Westminster Society entertained under a former state of affairs, of fusing those three Corporations into One Faculty, is dispelled, we hope never again to appear in this country. Whatever be our respect for the indefatigable industry of Mr. Warburton, and the devoted attention which he paid to the objects of his Committee, we cannot conceal our mistrust of his confidential advisers, one of whom has given such a sample of his powers in his administration, or, we should rather say, his mal-administration of the Anatomy Act. Nevertheless, we by no means regret what Mr. Warburton has done; nay, we think, that he is, more than any other man in the House of Commons, entitled to the lasting gratitude of the Medical Profession. He drew aside the veil which so long concealed the proceedings of the oligarchy of our profession, and exposed to public view the defects, too often glaring, of the several establishments which that oligarchy directed. He has, therefore, given the stimulus to those spontaneous efforts which, we hope, will ere long be more fully manifested, and which the voice of public opinion will not suffer to cease till our Medical Corporations have undergone that pruning which will make them more useful to science, more valuable to the public, and more creditable to the British empire.

We have strong reason to believe, that the ruling powers at the College of Surgeons have not been idle, at least in considering what extent of Reform is necessary; 'tis true some will say, it requires no great degree of consideration to discover the flaws in the College of Surgeons. Granted. Yet we must say, that to reform the College, and to ascertain its defects, are two problems requiring for their solution minds of a widely different stamp. The uncompromising spirit, the integrity of purpose, the penetration and perseverance, which are so well fitted for the latter object, are too often destitute of the genial influence of that judgment, and that discretion, and those expanded views which are absolutely indispensable for the attainment of the latter. Surely, the

Members of the Council must be blind indeed if they do not see the defects which many of their own body have aided in exposing to the Parliamentary Committee, and we trust, that, ere many months have elapsed, several useful changes will have been effected in the College. Already we begin to hear rumours of some of those changes. We are informed, that the examinations of candidates for the College diploma have lately assumed somewhat of a more serious character; that a greater portion of time has been allotted to each candidate; that bones and preparations have been introduced with a view to ascertain the *reality* of the candidate's acquirements; and, we confess, we look upon these improvements only as preludes to the adoption of some system of education as well as of examination, which will give character to the diplomas of the College. As a further proof that something is being done at the meetings of the Council, we may mention, which we believe has been in no degree made a secret of, viz. that a proposition, which has been some time before them, for disqualifying Teachers from becoming Examiners, was, after much discussion, rejected on Friday last by a large majority, the mover, Mr. Guthrie, and Messrs. Keate and Vincent being the only members of the Council who voted in favour of the measure; and, when we remember that of the majority of 18, who voted against it, only four were lecturers, and the rest have no possible chance of ever becoming lecturers, we cannot attribute their opposition to any thing like interested motives. For ourselves, we are decidedly opposed to any measure that would exclude Teachers from pronouncing upon the qualifications of candidates for diplomas in every department of the profession. It requires no argument to prove that a man, who is in the habit of teaching a particular science, is better qualified to examine on that science than the man whose avocations do not call for that constant replenishing of his knowledge, which every man requires in order to his being a successful teacher. But we are told, that the object of the mover was to obviate the partiality which might be shown to the pupils of particular schools, were those teachers, from those schools, Members of the Court of Examiners. That the object is a good one we will not deny, and that Mr. Guthrie was influenced by the most disinterested motives we must also admit; but we are decidedly of opinion, that there are many ways of accomplishing the object he had in view, without having recourse to the enactment of a law which would exclude from a seat, at the Examiners' Board, those very men who are best qualified for the office of Examiners. We sincerely congratulate the Council and the Profession in general on the loss of this measure, which certainly was by no means calculated to diminish the number of the flaws existing in the College. We think we may likewise congratulate the Students of London, for not only will they have more competent judges of their attainments at that ordeal through which they must all pass, but also because they will not be deprived of the valuable instruction of some of their ablest and best instructors. That Mr. Guthrie must have ceased to lecture, had this proposition passed, was generally apprehended, and we need not tell those who are acquainted with that gentleman's abilities as a lecturer, that it would have been no easy matter to supply his place. Few men have enjoyed a greater field of experience, and few have laboured with more persevering industry; few, too, it will be readily admitted, have a more

happy method of communicating instruction.

We shall watch the proceedings of the College, and, indeed, of the other medical bodies, and, as *fresh symptoms* of amendment show themselves, report progress to our readers.

ANATOMY BILL.

Sir A. Cooper, Sir B. Brodie, and Mr. Travers waited on Mr. Goulburn, at the Home Office, during this week, respecting the working of this Bill. Nothing definite, we believe, was accomplished further than that Sir Astley committed a slight error in apprehension,—in understanding that each lecturer might have the privilege of soliciting any parish for bodies for his own lectures. This is not the case. We know for a fact, that more than *twenty bodies a-week* have been distributed to the different schools in London for the last month. We prognosticated as much.

DR. STOKES'S LECTURES.

The public are seldom interested in the squabbles of rival journalists, and it is well for the interests of truth, in politics and science, that it is so. We therefore feel that some apology is due for the observations we are about submitting to the medical world. But holding, as we do, that the actions and motives of those who guide the public mind, or are supposed to do so, should be beyond suspicion, we enter on a simple narrative of facts connected with the *Medical and Surgical Journal*, and the opposition started against it after the secession of one of its former proprietors, leaving it to all who read to draw their own conclusions. We are the more desirous of stating these circumstances as they really occurred, because of the attempts that were made to raise a prejudice against the present conductors of this Journal.

It is already known that in August last the proprietors of this Journal parted, with his full concurrence, or rather of his own seeking, with the then Editor of the Journal, and in our number of the 23rd of that month we stated as follows:—

"It has already been announced to the public that this Journal has changed its Editors; that it has ceased to be under the fostering care of Dr. Ryan. Any further explanation of the circumstances which led to the separation would not interest our readers, but would necessarily exclude really useful matter."

This was in rejoinder to observations in an attempt made the preceding week, by our former Editor, to bring forward a rival publication. This was as simple in explanation, and as delicate towards the other parties as could have been; much more so than they either deserved or probably expected. This will be more evident when the language used in a *new and different series* of the Journal is read. In the first number of *the Mock*, the writer, after stating "the difficulties, misfortunes," and "sacrifice of time and labour," alleged to have been incurred, announced with great pomposity and flourishing of trumpets that this (i. e. *our*) Journal was "*not* edited by Dr. Ryan, or supported by the eminent friends whose contributions *he* had been enjoying." He went on to say,—

"The number now published is edited by him," (Dr. Ryan, of course,) "and contains the continuation of the valuable series of lectures he has already published." * * * * * * * * * *

Adding, "his" (Dr. Ryan's again,) "eminent contributors still continue to him, *and to him alone*, their valuable support."

Among the most eminent contributors of "valuable support" to the original Journal was Dr. William Stokes, of Dublin. The lectures of that gentleman, the value of which we may safely leave to those who have read them to estimate, having been forwarded, in continuation, to us alone, notwithstanding the unworthy attempts made to withhold them from us, the nature of which no one is more indignantly aware of than Dr. Stokes himself.

Pending the discussion with Dr. Stokes as to which of the parties he would supply his lectures, we were compelled to discontinue the series for a week or so at the period under notice; but Dr. Ryan, on his part, published a lecture of "Dr. William Stoker, of Dublin," with what intention we must leave our readers to infer.

In the mean time, Dr. Stokes, after due inquiry, recommenced supplying his lectures to us, and to us only, and the same was duly notified to our subscribers.

In the number of the mock Journal, Aug. 30, the following appeared among the notices to correspondents:—

"*Dr. Stokes's Lectures.*—The illness of the gentleman who furnishes Dr. Stokes's lectures prevents him from copying them from the short-hand notes. We daily expect them."

In the same number Dr. *Stoker* appeared as in the last before, but not so Dr. *Stokes*. Next week we had Dr. Stokes's Lectures (xxxi.) which our *promising* rival had then only of the Dr. S. ending in "R;" but his number on this occasion announced, in the very convenient corner appropriated to correspondents, that "*an unknown friend*" (how luckily!) "in Dublin had furnished him with a complete series of Dr. Stokes's Lectures, which were taken at the time of delivery. These," he added, "were taken in short-hand, and are verbatim."

Let the reader bear in mind two things asserted here,—that the lectures were taken in short-hand *verbatim*, and (the alleged excuse of the week preceding having been abandoned as no longer tenable) that our rival had been "FURNISHED" with "A COMPLETE SERIES of Dr. Stokes's Lectures."

We proceeded with the publication of the series, and looked to see if the promise held out in the other quarter from the "unknown friend" would be maintained by his furnishing the remaining lectures as early, at least, as they appeared in our pages, unless, a fatality scarcely to be apprehended, he also were taken ill. Was that, however, the case? Facts and dates shall answer.

We continued the series of Dr. Stokes's Lectures. To show the plan of the other Journal with respect to them, we give the dates on which a few of them appeared in ours and our rival. Lecture xxxi. was published by us Sept. 6, in the Mock, Sept. 13; Lecture xxxii. by us, Sept. 13, in the Mock, the week ensuing, and thus with the remainder of the series.

The lectures of Dr. Stoker now unaccountably disappeared from the pages of *The Mock*, and no more was heard of him. The whole attempt at deception was not, however, palpable enough to deceive even the few friends adhering to the party; and, besides, the true lectures appeared with some little choppings and changes: they had been metamorphosed into a *rifacciamento* for the other. By a happy accident we traced in the new version of the lectures some points where the lecturer himself had added to his oral statements the results of after-reading or otherwise acquired information. This we here uncomplainingly, well knowing that the members of the most liberal of professions would have little difficulty in placing an estimate on such proceedings.

With the purpose of trying whether "The Mock" could keep its promise of furnishing the lectures without having previously seen them in our columns, we suppressed for a time the last lecture of Dr. Stokes's series, which appears in this number. Having little doubt of the real source whence these lectures in "The Mock" were derived, we were not, surprised to read, in his Number of the 13th inst., the following lines:—

"*Observing* that the succeeding Lectures of Dr. Stokes on Diseases of the Chest, *promised* (not "furnished," now be it recollected) to us through the kindness of a friend," —"and recollecting," &c. And this is followed up by a gratuitous assault (the motives as well as justice of which we need not characterise) upon Dr. Stokes, whose lectures the "Mock" has already published among his valuable contributions; "and other of whose lectures (he says) he will publish hereafter." Yet, of such a gentleman he writes thus: —

"It cannot have escaped observation, that Dr. Stokes's Lectures, though," &c. &c. "are *utterly unworthy of the character of a systematic and instructive course on the Theory and Practice of Medicine, and therefore it* MATTERS NOT SO MUCH WHEN THEY ARE TERMINATED!"

What feeling can we entertain for the writer of these lines?—only pity mingled with regret.—*Verbum non amplius addam.*

PHILOSOPHICAL TRANSACTIONS FOR 1834.—PART II.

Sir Charles Bell "On the Relation between the Brain and Spinal Marrow."

"OTHER questions will be suggested in reference to the symptoms of disease in the brain. When the side of the body is paralytic, how far are the nerves affected which appear to have their origin above the decussations? Does the mouth, or lingual, or the portio dura of the seventh nerve, correspond with the spinal nerves? Do the third nerve and the muscles of the eye partake of the condition of the body?

"As there is no decussation above the apparent origin of these nerves, and as the commissures of the brain do not serve to explain this phenomenon, we are directed in our inquiries to the spinal marrow.

"The spinal marrow has much resemblance to the brain in the composition of its cineritious and medullary matter, and in the union of its parts. In short, its structure declares it to be more than a nerve, that is, to possess properties independently of the brain. Another consideration presses upon us. Where are the many relations existing between the different parts of the frame, and necessary to their combined actions, established? There must be a relation between the four quarters of an animal. If the muscles of the arm or of the lower extremities are combined through the plexus of nerves in the axilla, and in the loins, what combines the muscles of the trunk, and more especially what joins the extremities together in sympathy? That these combined motions and relations are not established in the brain, the phenomena exhibited in stimulating the nervous system of the decapitated animal sufficiently evince. They must therefore depend on an arrangement of fibres somewhere in the spinal marrow. Comparative

anatomy countenances this idea, since the motions of the lower animals are concatenated independently of a brain, and independently of the anterior ganglion, which in some respects gives direction to the volition of these animals.

"It comes next to be inquired, what use there can be in a decussation, by which one side of the brain is made to serve the opposite side of the body. Ingenuity can offer no reason for such an arrangement; the object must surely be an interchange of fibres, and consequently a correspondence in the movements of the sides of the body and of the extremities, and on this subject it must be admitted, that although, in nine cases out of ten, the side of the body opposite to that which is diseased in the brain is affected with paralysis, it is not always so, and very often a certain debility is perceptible in the side which is least affected. Again, when a man is seized with paralysis, he is sometimes at the instant affected with pain in the other side. These irregularities tend to countenance the belief that the decussations of the sensitive and motor spinal columns are rather intended to effect combination and sympathy between every part of the frame, than that one half of the brain should belong to the opposite half of the body, for no apparent object, and without producing any harmony of action.

"Such arguments induce me to believe that the brain does not operate directly on the frame of the body, but through the intervention of a system of nerves, whose proper roots are in the spinal marrow, and that the decussation, or rather the arrangement of the fibres, takes place at the point where the columns, descending from the brain, join the spinal marrow, and consequently in effect above the origin of all the nerves, excepting those of the four senses. This supposition would furnish an explanation of the whole of one side of the body, limbs, face, and head, being similarly affected in paralysis. It would also explain the appearance which all the nerves of motion and sensibility have, of coming in a direction upwards from the spinal marrow, rather than directly outwards from the brain, as the nerves of the proper organs of sense do. In reflecting on the origins of the nerves of the encephalon, it appears that neither nerves of sense nor of motion arise from the cerebellum or its processes. It further appears that the restiforme bodies or processes form no union or decussation, similar to those which we have described in the columns of motion and sensation which descend from the cerebrum.

"Those descending processes of the cerebellum, however, form a large portion of the spinal marrow: and we must thence infer that the cerebellum operates through the system of spinal marrow.

"The symptoms attributed to disease of the cerebellum do not remove the obscurity which invests this part of anatomy. We know that sometimes the whole hemisphere of the cerebellum is destroyed by suppuration, without loss either of sense or of motion. Moreover, when symptoms do attend disease of the cerebellum, its juxtaposition to the medulla oblongata inclines us to suspect that the effects are produced through the latter body. The substance of the cerebellum is not of diameter sufficient to have a large clot of blood in it, or a large abscess, without blood or matter, communicating with either the fourth ventricle, or bursting out upon the surface. The influence thus becomes general on the nervous system, and a confusion of the symptoms is the necessary result. We have no distinct and well marked case of disease in the substance of the cerebellum, such as we possess of disease in the cerebellum; and on the whole it does not appear to stand in direct relation to the motions of the frame, or to the common sensibility."

Dr. Davy on the Torpedo.

"The electricity of the torpedo, theoretically considered, offers a wide field for speculation. Is it, it may be asked, merely a form or variety of common electricity or a distinct kind, or not a single power but a combination of many powers? The first opinion, which is commonly received, and which has been advocated by Mr. Faraday, is supported by the majority of the facts adduced in this paper. The circumstance principally hostile to it, at least in appearance, is the interruption of the torpedinal electricity by the smallest quantity of air, and its want of the powers of attraction and repulsion in air. These peculiarities are seemingly in favour of the second opinion, that the electricity of the torpedo is specific and peculiar. But, till the opposite surfaces of the electrical organs can be perfectly insulated, so that no easier mode of communication is afforded than through air, they can hardly be considered as deserving of much weight. The origin of the electricity of this fish, perhaps, offers a stronger argument in favour of its specific nature, being apparently peculiar and distinct from any known mode of electrical excitement, independent, as far as we can judge, of chemical action, or change of temperature, or change of form. But this argument may be put aside by referring torpedinal electricity to animal secretion, the cause and nature of which are still a mystery. The third opinion may be indulged in as an hypothesis, and, as a guide to research, it may not be useless. It applies, however, almost as much to other varieties of electricity as to that of the torpedo, all of which, it is possible, may be compounded, or owe their various effects to the union of several powers or ethereal fluids, and their peculiarities, compared one with another, to the predominance in various degrees of these fluids.

What is known of the solar rays is not unfavourable to such an opinion; and the history of physical science, in relation to elementary ponderable matter, may rather give encouragement to the notion.

On the Ova of the Ornithorhynchus Paradoxus.

For the last thirty years naturalists have been disputing respecting the precise mode of generation of the monotremata, of which the ornithorhynchus is the type, some averring that this animal was oviparous, others that it was ovoviviparous. But the difference of opinion on this head seems to be near being definitively settled by the able paper of Mr. Owen.

Lactation has been generally regarded as exclusively associated with a true viviparous generation; and hence originated the disputation regarding the nature of the abdominal glands of the ornithorhynchus. Those who maintained the oviparous nature of the animal, strenuously denied their being mammmary, and even when obliged to admit, from recent observations and discoveries, that such were their nature and function, they have still endeavoured, with much ingenuity, to reconcile the lately ascertained facts with the oviparous theory of the monotremata. Both anatomy and observation have established that there is no essential dependence of lactation on placental development, and that the ovum of the ornithorhynchus is not expelled with a calcareous covering, nor does embryonic development take place after exclusion by a process of incubation.

That the ornithorhynchus sucks its dam, is proved by other facts besides its pliant bill, and the oozing of milk from the mammary gland, circumstances that merely go circumstantially to establish a probability of the fact. Aristotle made the observation many ages ago, that "no oviparous animal has an epiglottis;" and there are perhaps few generalisations in the Historia Animalium that testify more strongly to the extent of his anatomical researches. This remarkable proposition has stood the test of ages of subsequent research, and is adopted by Cuvier, without any modification, in the "Règne Animal." The ornithorhynchus possesses a large and well-formed epiglottis, and it certainly has mammary glands. From this we may be led to conclude that an epiglottis is formed, not because the fœtus is developed by a placenta, but because it is to be nourished after birth by lactation.

From these various facts, as well as many others illustrative of the subject, together with the general anatomy of the animals with respect to its generative organs, Mr. Owen demonstrates, we think, beyond doubt, that the monotremata, like the marsupiata, are essentially ovoviviparous.

PROGRAMME OF THE PROPOSED PRIZES FOR THE YEARS 1835 AND 1836.

Great Prize for the Physical Sciences, 1835.

The Academy recalled their proposition in 1833, for the great prize for physical sciences, which, should there be a deserving candidate, will be distributed at the public sitting of 1835, for the following subject.

"To examine whether the mode of development of the organic tissues in animals may be compared to the development of tissue in vegetables."

"To take this opportunity of recalling the different systems of physiologists, and to repeat their experiments, and to see how far they corresponded with the general laws of organisation."

"Particularly to observe whether an inferior animal is developed in any other way than a superior; whether there exists in the increase of the acotyledonous, monocotyledonous, and dicotyledonous, so much difference as authors in general believe; lastly, if amongst the dicotyledonous, there are many modes of growth."

The prize to consist of a gold medal, the value of which will be three thousand francs. The Memoirs or Papers to be forwarded to the Secretary of the Academy before the 1st of April, 1835. The authors to inscribe their names in a note sealed, which will not be opened unless the Memoir is successful.

Experimental Physiological Prize, founded by M. de Montyon.

The Academy announced that a gold medal would be given, the value of which would be eight hundred and ninety-five francs for a work, either in manuscript or print, which appears to have contributed most to the progress of experimental physiology,

The prizes will be distributed at the public sitting, 1835. Works, or Memoirs, presented, or sent by the authors, free of expense, to the Secretary to the Institute before the 1st of April, 1835.

Medicinal Question Prize, founded by M. Montyon.

For the Concour of 1834, the Academy proposed the following question:—

"To determine what are the alterations of organs in diseases termed continued fever.

"What are the relations which exist between the symptoms of these diseases, and the alterations observed.

"To bear on the therapeutical views which are deduced from these relations."

The prize has not been named, but the subject put to concour.

The following is a verbatim report of the commission charged to examine the Memoirs.

The commission named to judge the different Memoirs addressed to the Academy, is composed of MM. Serres, Dumeric, Doubie, Blainville, and Magendie.

Amongst the numerous replies which have been submitted to its judgment, the commission has read with much interest, and particularly distinguished four memoirs inscribed under the numbers of 2, 6, 8, and 12.

The authors have considered and treated the question in very different lights. The commission was much pleased in recognising in each real deserving merit, and a thorough knowledge of the actual state of science, particularly of the proposed question.

The commission were so far satisfied, that they at first thought it proper to divide the prize between two of them. But on considering that the whole had treated their subject so satisfactorily, either by the exposition of facts, or in their conclusion of different circumstances, they, nevertheless, yet left open a large space; for example, the relations which exist between the symptoms of fever and the organised lesions, and the therapeutical views which have been drawn from these relations, have generally, from neglect, been presented in too superficial way; and as these parts of the question are the points the most difficult, they are also the most important, and those which claim the deepest researches, and the greatest interest for humanity.

Considering, moreover, that the memoirs, which have been distinguished this year, leave hope that the authors are capable of rendering more perfect their labour, and to resolve as completely as possible the proposed question, from which there would result a progress in one of the most obscure and difficult branches of theoretical and practical medicine, the Commission decided, that it would not distribute the prize of M. Montyon on this particular subject, and therefore requested for the honour of the Academy to submit the same question for the prize for 1836, and at the same time to re-establish the prize at its primitive value, consisting of a gold medal of ten thousand francs.

QUESTION OF MEDICAL CHEMISTRY.

Prize founded by M. Montyon.

The Academy proposed to determine the physical and chemical alterations of solids and liquids, in the disease designated *continued fever.*

The Academy has received three memoirs, Nos. 4, 11, 12.

No. 4, the Commissioners, MM. Thènard, Dulong, Magendie, and Dumas, stated, was the only one in which the question proposed had been discussed. The author has given the analysis simply of some fluids, but the other parts of the memoir show that he is not sufficiently acquainted with animal chemistry to allow of any confidence in the result of his analysis.

No. 11 contained only one particular plan of experiments, and one which is very uncertain.

No. 12 contains no chemistry.

The Commissioners, therefore, will not distribute the prize proposed, and recommended, in consequence of the difficulty which the question presented to the candidates, to have it withdrawn.

SURGICAL QUESTION.

Montyon Prize.

The following question was proposed by the Academy, in 1834.—"To determine, by a series of authenticated facts, what are the advantages and inconveniences of gymnastics and mechanisms used in deformities of the osseous system."

Nine prizes, addressed to the Academy, have been examined by the Commissioners, composed of MM. Larrey, Magendie, Serres, Double, and Lavant.

Many of them were deserving of great praise, either from the number or importance of the facts which they contain, or for the ingenious mechanisms they proposed for cases of deformity of the osseous system. There was not one, however, to which the Commissioners could award the prize; it was therefore again proposed for 1836.

The prize consists of a gold medal, the value of which is 10,000 francs. The memoirs to be addressed to the Secretary of the Institution before the first of April, 1836.

Foreign Medicine.

Human Combustion.

BY M. BIDOR,

Surgeon to the Hôtel Dieu, of Troyes (Aube).

We find the details which follow in the *Journal de L'Aube.* It appears to us extremely interesting, we will therefore extract it.

"On Thursday last, about two o'clock in the afternoon, the inhabitants of the Rue de la Pie observed some smoke escaping from a window in the house of No. 23, inhabited by a woman named Lanoue. The alarm soon spread in the quarter, a person entered the window, and soon descended with an infant in his arms about eighteen months of age, the garments of which were in a state of combustion. Luckily, Dr. Dalaine happened to pass at this moment, who rendered assistance to the poor child, whose body was covered with burns. This same person had the courage again to enter the window, the room of which was filled with smoke. Under the table he

found lying a portion of the body of Lanoue; all her garments were completely destroyed, and the body that remained presented exactly the appearance of a piece of broiled meat.

The infant, who was still alive, however, not the least hope remaining of her recovery, was taken to the Hôtel Dieu, where, after being about two hours, she expired.

The following is the report of this unfortunate event:—The woman Lanoue was in the habit of getting very tipsy, and it is supposed that her garments had caught fire, and been communicated from her to the infant, when the woman was in a state of intoxication.

Effects of taking Snuff.

BY DR. LIRENE,

Member of the Royal Society of Medicine of Marseilles.

A woman, 62 years of age, of good constitution, sanguineous temperament, and mother of many children, came to consult me in Nov. 1829.

She complained then from what she had been suffering two months, of a very unpleasant sensation in the nose, a constant irritation, and a sense of heat which she compared to acute inflammation of the mucous membrane.

This disease increased to such an extent, that she was obliged to keep her mouth constantly open, for the air in passing through the nostrils gave her excruciating agony. This constrained position (being obliged to keep her mouth open night and day) caused her to be constantly thirsty, which by drinks was only momentarily relieved. She was also troubled with violent pain in the forehead.

The patient told me that she had been in the habit of taking large quantities of snuff, which she believed gave rise to this disease.

On examining the mucous membrane, I found it swollen and of a bright red colour. On attempting to introduce the finger into the cavity of the nostril, it gave her excessive pain. The nasal cavities were, when healthy, of natural diameter, but were now so much contracted, that a small tube could scarcely be made to penetrate them.

I suspected the existence of a polypus, but, on a very minute examination of the posterior nares, nothing of the kind could be detected. I now treated it as simple inflammation of the Schneidcrian membrane, by antiphlogistics, &c. She still, however, if possible, would take snuff; I of course desired her to discontinue it. After bleeding her three or four times she got much better, the inflammation gradually subsided, and she believed herself completely cured.

Foreign Hospital Reports.

HÔPITAL DES ENFANS MALADES.

Pneumonia coming on after an attack of Chronic Bronchitis, in an Infant affected with Rickets, treated by Tartaric Emetic.

Ursule Martel, four years of age, was brought to this hospital on the 9th of Nov. in the following state, under M. Baudelocque. Frequent cough; no expectoration; respiration short and incomplete, somewhat diaphragmatic, accompanied with great expansion of the nostrils; respirations fifty-four in a minute; the sound emitted from the chest from percussion is but slightly sonorous, especially on the right side; there is also a sub-crepitous rattle heard on this side, both on the upper and lower part. On applying the stethoscope to the inferior angle of the scapula of the same side, bronchophony may be distinctly heard, and throughout the whole extent of the left side there is a constant gingling sound; pulse small, extremely frequent; skin hot; tongue moist, but covered with a greenish fur; great thirst; no appetite; great pain on pressure on the epigastrium.

The parents stated that till two months ago the child had since its birth been in perfect health, and since the time of its attack had been daily getting worse. It suddenly ceased to walk; all the bones in its body became more or less deformed. The chest is very much depressed laterally, and behind presents a considerable prominence towards the union of the spine with the floating ribs; head very large; forehead prominent. The patient has remained up to the present time in a perfect state of sensibility, and has not even had an attack of convulsions. On his admission, M. Baudelocque prescribed twenty-four grains of the white oxide of antimony in some gummy julep.

8th. Unable to lie down on the right side; dyspnœa, if any thing, more intense; respiration 48; pulse countless; cough very troublesome. The same phenomena are observed from percussion and auscultation. The dose of the white oxide of antimony has been increased to half a drachm.

9th. The difficulty of respiration more marked; tongue and face of a violet hue. A mixture of sounds may be heard throughout the whole extent of the chest, viz. the mucous, sibilous, and crepitous; the other symptoms indicated by auscultation are the same as yesterday. Cough continues incessant; bowels regular, stools natural. Three grains of tartar emetic to be put in four ounces of distilled water, and a spoonful of it to be taken three or four times a-day.

10th. The oxide of antimony is increased to 3 j. dose.

12th. The symptoms have remained much the same as on the 9th.

17th. Bronchophony and mucous rattles have completely disappeared; respiration more natural, it still, however, is as many as 36 in a minute; tongue and face of a natural colour.—Medicines to be continued.

By the 20th the child was sufficiently well to leave the hospital, still he suffered from some slight bronchitis.

Pneumonia accompanied with Bilious Symptoms—Administration of Emetics and Purgatives—Cure.

Adrien Collette, six years of age, of a weak constitution, and lymphatic temperament, was brought to the hospital with an enlargement of the cervical ganglions, from which he had suffered eight days.

He was affected about two months ago with slight cold, and on the 30th of May last was attacked with fever, without any appreciable cause. He then complained of irregular shivering fits, this was succeeded by nausea and bilious vomiting, which, at intervals, lasted for three days. He also complained of colicky pains, with tenderness of the epigastrium. Leeches were applied, from which, however, he received no benefit. On the 6th of June the preceding symptoms came on with acute pains in the right side, much increased by the cough and each inspiration. The patient was in an extremely debilitated state when brought to the hospital, and the following were the symptoms he presented at that time.

Decubitus of the back, suborbital cephalalgia, sclerotic coats of the eye tinged with bile, countenance flushed, lips dry, tongue covered with a yellowish mucous fur, bitter taste in the mouth, craves for cold drinks, great thirst, nausea without vomiting, anorexia. Has not had any alvine evacuation since her admission; skin rather warm, and dry; pulse regular, 80 in a minute; inspirations 44; complains of a vague pain in the right side of the chest, increased from percussion, and also on inspiration; cough dry; no expectoration. There are sub-crepitous and also mucous râles heard on the right; sounds on the left normal. The child has no affection of the head, answers questions rationally, but voice very feeble. One grain of tartar emetic to be put in two pints of water, and given as a drink.

Since he has drunk the solution of tartar emetic he has ejected much porraceous matter. Has complained of no griping pains, nor has he passed any alvine dejection. The remainder of the day he was much easier.

9th. Countenance red; skin of natural temperament; tongue moist, and deprived of a great quantity of its sordid matter. The little patient now craves for food, which before he had not done since his admission. Chest much better. An emollient injection to be administered immediately.

The patient remained in the hospital till the 14th; had taken once since a fourth of the before prescribed potion, which caused slight vomiting. His bowels for the last few days have been very regular, and on the 16th of June he was discharged from the hospital quite well.

HÔPITAL DE NECKAR.

Aneurism—A fibrinous and purulent Concretion in the Heart.

A woman, 28 years of age, was admitted on the 20th of August into this hospital under M. Richeteau. She was of a very debilitated constitution, in fact, at the time of her admission, nearly in a state of anæmia. She stated that for some time she had suffered from suffocations and palpitations of the heart. At different times, for the last two years, she had been laid up with œdema of the legs, and had been admitted into several hospitals for this latter disease. Respiration very difficult and accelerated; she is obliged constantly to remain in the erect position. The beats of the heart are without any perceptible impulse, or without any anormal *bruit;* pulse depressible, between 90 and 100 in a minute; moderate thirst; respiration more and more embarrassed. She remained in this state till the 5th of February, when the difficulty of breathing became more urgent, the beats of the heart less developed, with now a slight perceptible *bruit* after the action of the left ventricle. The patient died the next morning about eight o'clock.

Autopsy twenty-four hours after death.—Chest.—Serous effusion in the cavity of the pleuræ; lungs in a somewhat contracted state; the left presents, opposite to the heart, a red surface, of the size of the palm of the hand, in such a complete state of induration, that renders it quite impermeable to the air. The pulmonary tissue in this place offers an appearance similar to that of the liver.

The pericardium contained only a very small quantity of lemon coloured serous fluid. The heart extremely pale and flabby, of larger size than natural; the right cavities offer nothing anormal; the walls of the left ventricle are not thicker than those of the right; mitral valves hard and cartilaginous. There results from this formation two small holes, of sufficient size to admit the quill of a pen, separated one from the other by a tendon of one of the carneæ columnæ.

The left auricle is very much dilated; it is of sufficient size to admit a hen's egg; it was filled with a clot of black blood, and also of lymph of a brightish colour. This auricle formed also a kind of bag, the walls of which were very thin. This pouch was of an inch and a half in diameter; it contained a kind of central cavity which communicated with several small cysts, in each of which was found some purulent liquid. The walls of

this aneurism were extremely thin, and in a complete state of ramollissement.

Another curious case of this description, with fibrinous concretions, and with even rupture of the two fleshy columns of the heart, is quoted by M. Ricord, in the *Archives Générales de Médecine.* The patient had frequent attacks of dyspnœa, accompanied with violent palpitation of the heart; ten days after he saw this patient she died. On the autopsy, the heart was found much larger than natural: in the left ventricle a round tumour was discovered of a brown chocolate colour, about eight or nine lines in diameter, extremely soft. The auricular ventricular opening was ossified in many parts. In the left ventricle two fleshy columns were ruptured, seated at some distance from each other. The appearance of the ends of the ruptured portions showed that it was of no recent occurrence.

British Hospital Report.

WESTMINSTER HOSPITAL.

It is a common remark, when speaking of the treatment of fractured ribs, to say, "the usual plan of treatment was adopted," meaning thereby that a restraining bandage was applied, and antiphlogistic measures put in force. Some objections have, however, been raised to this mode of proceeding by Sir Wm. Blizard, and it is his opinion that these fractures are best treated without applying any bandage at all, depending solely on bleeding, rest, &c. A few cases thus treated may do well, but not without much greater pectoral irritation, and running great danger of pneumonia, and, perhaps, more especially in a scrofulous constitution, developing a latent phthisis. This opinion is based on physiological and pathological principles. In the first place, we know that when an organ is out of order or otherwise injured, the less it is employed the better: in gastritis, in pneumonia, and indeed in all complaints, we endeavour to prevent the action of the organ which is in a state of lesion, and in proportion as we effect our object, so is the advantage derived by the patient, and the success of the case. If this reasoning apply to the treatment of internal diseases, it must certainly be more applicable to surgical cases, more especially to fractures. If the fragments of a fractured bone are not kept in due apposition and perfectly at rest they cannot unite; this is not unfrequently illustrated in cases where fracture of the olecranon has been mistaken, and the fore-arm flexed on the arm; ligamentous union is the result. And now, to apply this to the treatment of fractured ribs: if there be not a bandage applied firmly round the thorax, so as to prevent its parietes being raised and depressed during the action of respiration, the fragments will be constantly grating on each other, and cannot unite. The action of the bandage is, therefore, to restrain the motion of the ribs, and to cause abdominal respiration, or, in other words, to bring the diaphragm more into play.

Rather more than a year ago a case occurred at the Old Westminster Hospital, in Percy Ward, which strongly illustrates the danger of following Sir W. Blizard's advice in not applying a bandage. A man was admitted under the care of the surgeon of the week, with symptoms of pneumonia arising after a fall in which the right side of the thorax was injured. The part complained of was carefully examined, but no fracture could be discovered. One of the physicians accordingly saw the patient, and prescribed for him. The man survived the accident a week, and, on examination of the body afterwards, evidences of acute pneumonia and pleuritis were discovered, and a rib was found to be fractured, the pointed fragments having injured their investing membrane of the thorax, and caused the inflammation. The reason why the existence of the fracture was not ascertained was, the inferior angle of the scapula immediately covered the part injured, and prevented the crepitus being perceived. Here Sir Wm. Blizard's plan was accidentally followed, and with the worst consequences. It cannot be said that a fair case was not afforded. From the fact that the existence of the fracture was not known, it must be evident that neither prejudice nor a desire to disprove the value of Sir W. Blizard's treatment obtained. A case thus accidentally treated is, on that account alone, of more real value than a hundred in which experiments are tried.

While on this subject, it may be advisable to mention rather a curious case of fracture of the ribs which has recently occurred in the wards of this hospital. A man was admitted into Percy Ward of the old hospital early in November last, in consequence of a cart passing over the chest. Fracture of several ribs was ascertained to have taken place; a bandage was applied, and the antiphlogistic treatment persevered in. He was doing well; he bore the removal from one hospital to the other without suffering from it. He was then placed in Northumberland Ward, on the ground-floor; but in the course of a few days was taken up stairs to Burdett Ward, on the second floor. Whether he caught cold in consequence of this removal, or undue pressure was by some means exerted on the parietes of the thorax during his transit, he was soon affected with severe pneumonia and pleuritis, under which he sunk.

On examination, besides the indications of the inflammation which terminated life, six ribs were found fractured on the right, and two on the left side. Their extremities were still rough and angular, and, although upwards of a month had elapsed since the accident, union had not taken place.

APOTHECARIES' HALL.

Names of Gentlemen to whom the Court of Examiners granted Certificates of Qualification on Thursday, 18th Dec.:—John Chapman, Stoneleigh; Wm. Friend Morey, Portchester; John Francis, Westerham; John Bird, Stourminster; Wm. Henry Octavius Sankey, Wingham; John Moore, Kilraughts, Antrim; Wm. Heane, Gloucester; Robert Eddowes, Loughborough; John Chapman Green, ——; Hugh Pitter Fuller, Croydon, Surrey; Thomas Skelding, Bridgenorth; Harold Giles, Margate; Thomas Chesman, Hatfield; John Burrows, Lancaster; John Henry Evans, London; Wintour Harris, Clifton; Henry Hase, Nottinghamsh.; John Sullivan, Limerick.

MISCELLANY OF FACTS.

Weights and Measures' Act.—The Act of the 4th and 5th of William IV. requires that all brass weights must be stamped, and inflicts a penalty of not less than 50*l.* on any person who uses unstamped weights after the 1st of January (Thursday) next. The magistrates at Worship-street Office have decided that the apothecary's weights comes within the meaning of the Act, as they are made of brass. The Act also requires that avoirdupois weights must be used when drugs are sold by retail. This is undoubtedly in some cases impracticable; for instance, if a person goes into the shop of a surgeon or apothecary, and asks for half a grain or a grain of some drug, or a scruple or drachm of (say) rhubarb, it is impossible to sell those articles by avoirdupois weight. It should be also borne in mind that the stamp of the Founders' Company is not sufficient, as the District Inspectors require also the local stamp of the Inspectors.

A question of some importance has been raised at one of the Police Offices, and has been referred to the Quarter Sessions, the magistrates having declined adjudicating in the present stage. It is, whether resident surgeons in hospitals and other charitable institutions are or are not rateable to the poor? The two cases in which the point has been raised are those of Mr. Edward Nettlefold, of St. John's Hospital, Hatton Garden, and of Mr. Staples, resident apothecary of St. John's British Hospital, Cross-street, in the same neighbourhood. Mr. Nettleford had a brass plate with his address on the house.

New Discovery.—M. le Cere, the proprietor of an iron manufactory near Etienne, in France, is reported in the French papers to have discovered a method of melting soft iron (*fer doux*), which has hitherto been considered as infusible, even at the greatest heat which could be obtained in a furnace.

APPOINTMENTS.

Naval.—The following gentlemen, assistant-surgs., have been appointed surgeons:—Messrs. H. D. R. Henning, D. G. Miller, James Bankier, J. Watson, J. S. Hampton, and J. Brooks. Mr. David Wise, surgeon to the *George III.* convict ship. Mr. C. O'Brien, to be an assistant-surgeon and appointed to the *Goldfinch*.

Military.—Staff Assistant-Surgeon Henry Hadley, M.D., to be assistant-surgeon of the 40th Foot, in place of Archibald, deceased. The following gentlemen have been appointed assistant-surgeons to the Forces.—Assistant-Surgeon Edw. M'Iver, from the 23rd Foot, vice Triganee, promoted in the 30th Foot; Francis Bennet, M.D., vice Hunt, deceased; and John Fisher Murray, M.D., vice Hadley, appointed to the 40th Foot,—all placed on the Hospital Staff. Surgeon Grant, late of the 74th reg. of the Glasgow Recruiting Staff is ordered on Foreign Service, on promotion. Assistant-Surgeon Black, 84th reg., is appointed to Fort Pitt Hospital, Gosport.

General.—Dr. Jones, physician, to the Waterford District Lunatic Asylum. Dr. Clendinning, physician, to the Marylebone.

DEATHS.

Mr. Arthur Beetham, of Broad-street, surgeon. Mr. Walter Raleigh, a descendant of Sir Walter, of Bruff, Co. Limerick, surgeon R. Art., and Superintendant of the Dispensary in Bruff. Dr. Allan, R.N., suddenly, at Van Dieman's Land. Dr. Maxwell, surgeon of the Tyrone Infirmary. Mr. George Dunn, surgeon, of Patrington, Lincoln.

LITERARY INTELLIGENCE.

In January will be published the First Part of Professor GRANT's Outlines of Comparative Anatomy, which will contain the Osteology, the Ligaments, the Muscles, the Nervous System, and the Organs of the Senses. Illustrated by numerous engravings on wood.

An Inquiry into the Nature and Properties of the Blood in Health and Disease. By the late CHARLES TURNER THACKRAH. A new and enlarged Edition, arranged and revised by THOMAS G. WRIGHT, M.D. To which is prefixed a Biographical Memoir of Mr. Thackrah. London: S. Highley. 8vo.

Dr. BLUNDELL on the Diseases of Women and Children. Edited by Dr. CASTLE, Physician to the Brighton Dispensary.

Outlines of a new System of Philosophy; being a View of the System of Sciential Medicine, or Medicine (and all Human Knowledge), as provable as Geometry. By THOMAS EDEN, M.R.C.S. pp. 262. 1834.

Essay on the Physiology of the Blood. By ROBERT MUDIE. (Pamphlet.) 1835.

A Practical Treatise on Diseases of the Joints. By W. J. WICKHAM, Surgeon to the County Hospital, Winchester. pp. 178.

BOOKS RECEIVED.

Anatomical Description of the Parts concerned in Inguinal and Femoral Hernia. Translated from the French of M. JULES CLOQUET. With Lithographic Plates from the original etchings, and a few additional explanatory Notes. By ANDREW MELVILLE M'WHINNIE, Esq. London: Highly, 1835. 8vo.

An Essay on the Use of the Liquor Potassæ and Liquor Alkalinus in the Treatment of Malignant Cholera, with Notes and Cases. By HENRY WILKINSON DODD, M.R.C.S.L., &c. Durham: Highly, London; and Andrews, Durham. 1834. pp. 33.

CORRESPONDENTS.

Dr. Graves's Lecture in our next number.

In consequence of the immense press of matter that we are continually receiving from all quarters, we have been obliged, in justice to our contributors, to alter the arrangements of our last sheet, in order to afford more space for the communications of our valuable correspondents.

A St. Thomas's Student.—If he calls at our publisher's he may receive his communication. Upon a second perusal we think it not adapted to the pages of the Journal; besides, the matter he alludes to has been amicably settled, therefore we think it had better not appear in its present state.

O. P. Q.—If he calls at 356, Strand, any day before twelve o'clock, he will be able to gain all the information he requires.

In consequence of the Christmas holidays we must defer our Bill of Mortality till next week.

All Communications and Books for Review to be forwarded (free of expense) to the Publisher, 356, Strand, near King's College.

THE

London Medical and Surgical Journal.

No. 153. SATURDAY, JANUARY 3, 1835. Vol. VI.

LECTURES

INTRODUCTORY TO THE COURSE OF THE

INSTITUTES OF MEDICINE,

DELIVERED BY

ROBERT J. GRAVES, M.D.,

King's Professor, Dublin.

LECTURE IV.

Gentlemen,—Let us proceed with the subject of our inquiry, namely, the influence of light on animals. I have already alluded to some of the remarkable effects on animal development produced by the absence of light, as proved by the experiments of Mr. Edwards on tadpoles, and have also mentioned the curious fact of human monsters, that is to say, children wanting some parts of the extremities, being frequently known to be the offspring of persons who, from the nature of their abodes, spend a great proportion of their time in darkness.

You are aware that when light is brought to act fully and forcibly on an organ fitted for its concentration, it exerts a very considerable energy in modifying the functions, not only of the organ immediately acted on, but also of those which are closely connected with it by sympathy. Hence the reason why a glaring light gives exquisite pain to a patient labouring under ophthalmia, and hence it is, also, that light, in cases of cerebral fever, which disposes the patient to suffer acutely from its influence, may, through the medium of the eye, bring on violent paroxysms. There can be no doubt that, in most inflammatory affections of the brain and eye, light is highly intolerable and injurious, and, even in the healthy state of the eye, we frequently observe that a ray of sunshine suddenly falling on the eye will produce the strong convulsive action of the expiratory muscles which we term sneezing. In fact, exposure to more than a certain quantity of light, for any length of time, proves disagreeable to man, as well as all other animals. On the other hand, I need not say how necessary light is to the health and existence of human beings. You must have observed that plants growing in dark places are meagre and sickly, so are animals, and modern pathologists have assigned to this cause its full agency in their enumeration of the predisposing causes of scrofula, one of the most widely diffused and pernicious of human maladies. The development of scrofula depends not so much on the nature of the climate, as on the mode of life, and hence we find that, *ceteris paribus*, scrofula is more prevalent in dark and narrow, than in open and well ventilated, streets, in crowded cities than in the country. This is to be accounted for, not only by the numerous causes which tend to weaken the constitutions of persons living in towns, but also by the want of a proper exposure to light.

It appears that most animals are intended by nature to be abroad and active during the day, and to repose by night. Some, however, court a moderate light, and are chiefly seen abroad during the evening, while others sleep or remain concealed during the day, and seek their subsistence by night. The first are termed diurnal, the second crepuscular, the last, nocturnal. The crepuscular animals have their eyes adapted for seeing with a small quantity of light, and the nocturnal are capable of exercising the power of vision when every thing appears to be dark and undistinguishable.

When you compare the eye of man with those of animals intended by nature to be active during the night, you will find that he is destined to be a diurnal animal, having the day allotted to him for employment and exercise, and the night for refreshment and sleep. Consequently any departure from the course marked out for him by nature is wrong, and hence the habits of those persons, who reverse nature's law by turning day into night, are calculated to do them an abiding injury. It has been frequently observed by military officers, that in warm climates, where it is often necessary to march by night, in order to avoid the intense heat of the day, the soldiers suffer severely, and that none of the laborious duties incidental to a a military life cuts them up so rapidly as this night marching. Persons

whose employment keeps them up at night, as watchmen, bakers, printers, and glass-blowers, and those who follow dissipated habits, or pursue the pernicious absurdities of fashion, always exhibit, sooner or later, a marked decay of the vital powers. I do not mean to bring this forward as the sole cause of the premature debility and anticipated decrepitude of such persons, but it is reasonable to suppose that, *ceteris paribus*, an earlier breaking up of the constitution will occur in those who resist the law that ordains man to repose by night.

It is a matter of some curiosity to inquire whether all the human species are alike destined to sleep by night. It would appear from the accounts given by various travellers, that many of the negro tribes differ very much in this respect from other nations. Thus Hanno the Carthaginian, in attempting to circumnavigate Africa, was astonished at the tumultuous shouts, which, joined to the trumpets and musical instruments of every description, were continually heard during each night. Park, Clapperton, Denham, and Lander, and all modern travellers, agree in stating that it is almost impossible to sleep at night among the negroes, and Murray, in his Historical Account of Discoveries and Travels in Africa, observes, that "repose during the day, music and dancing prolonged through the night, form the usage prevalent in all the negro states. The same tendency is likewise observed in their descendants, who have been brought over to the West Indian plantations. Among the Albinos of the Isthmus of Darien, the practice of sitting up at night and sleeping in the day is also prevalent. Speaking of them, Wafer, an old traveller, says, "they see not well in the sun, their eyes being weak and running with water if the sun shines towards them, so that in the day time they care not to go abroad, unless it be a cloudy dark day. But, notwithstanding their being thus sluggish and dull in the day time, yet, when moonshiny nights come, they are all life and activity, running about in the woods, and skipping about like wild bucks, running as fast by moonlight, even in the gloom and shade of the woods, as the other Indians do by day."

Having said so much with respect to the influence of light on man, we come next to inquire whether light can be given off by animal bodies, including the human. It has been observed that light is generally given off in consequence of a chemical action not slow and feeble, but sudden and violent. Now, in living bodies, although they are most extensive laboratories, chemical action is never violent, and hence they are rarely the cause of light. However, we find that some animal bodies do actually give off light, and this in consequence of the secretion of a phosphorescent matter. Animal bodies, and among them, the human, abound in phosphates and hence they occasionally present luminous appearances. Among plants the phosphates are wanting, except among some of the cryptogamous, and of these, though several are known to emit phosphorescent light when dead or decaying, yet very few species are proved to exhibit true vital phosphorescence. In like manner, the phosphorescence sometimes observed in wood is owing to the presence of foreign matter, and not to any inherent property of the wood itself.

Vital phosphorescence, though rare in animals generally, is found to exist in some in very great quantity; thus the quantity of luminous matter given off by the glow-worm and fire-fly is very considerable. Most animal bodies, however, emit another kind of light in great abundance, when under the influence of chemical action after death. The formation of this species of light takes place during the decomposition of many animal substances, and is sometimes connected with peculiar states of the atmosphere. Thus I recollect, when I was one of the proprietors of the School of Anatomy and Medicine at Park-street, our subjects in the dissecting-room presented, for one or two nights, a very singular, and somewhat startling appearance, being covered all over with a phosphorescent effulgence. I remember also, while a student, being induced by curiosity to accompany some resurrectionary expeditions to the grave-yard, where I was frequently struck with the luminous appearances, produced by the adhesion of phosphorescent matter to the old coffin boards which were turned up in opening the graves.

It is an amusing thing to go back a few centuries and see how much ignorance prevailed, even among the learned, with respect to the nature and cause of this light. The first distinct account met with of light proceeding from putrescent animal flesh, is that which is given by Fabricius ab Aquapendente. He relates, "that when three Roman youths, residing at Padua, had bought a lamb, and had eaten part of it on Easter day, 1562, several pieces of the remainder, which they kept till the day following, shone like so many candles, when they were casually viewed in the dark. Part of this luminous flesh was immediately sent to Aquapendente, who was professor of anatomy in that city. He observed that both the lean and the fat of this meat shone with a whitish kind of light, and also took notice that some pieces of kid's flesh, which had happened to have lain in contact with it, were luminous, as well as the fingers and other parts of the bodies of those persons who touched it." After this, we find no account of any other similar appearance before that which was observed by Bartholin, and of which he gives a very pompous dedecription. This happened in Montpellier, in 1641. "A poor woman had bought a piece of flesh in the market, intending to make use of it the day following, but happening not to be able to sleep well that night, and her bed and larder being in the same room, she observed so much light to come from the flesh as to illuminate all the place where it hung.

A part of this luminous flesh was carried as a curiosity to Henry of Bourbon, Duc de Condé, the governor of the place, who viewed it for several hours with the greatest astonishment. The light was observed to be whitish, and not to cover the whole surface of the flesh but certain parts only, as if gems of unequal splendour had been scattered over it. This flesh was kept until it began to putrefy, when the light vanished, which, as some religious people fancied, it did in the form of a cross *."

In 1668, the celebrated Boyle gave an account of his experiments on shining wood, fish, and meat. This was the first scientific inquiry on the subject, and some time afterwards the discovery of phosphorus served as a basis for all future explanations of this and similar phenomena.

Occasionally human urine has been observed to be phosphorescent, and in some still rarer instances the sweat. Thus it is related, that "a person who used to eat great quantities of salt, and who was a little subject to the gout, happening to take off his shirt after violent exercise, the shirt seemed to be all on fire, which surprised him much. On examination, red spots were found on the shirt, and a physician who was present perceived an acrid sour smell."

It may not be amiss to make a few observations here on the phosphorescence of sea water, a phenomenon with which, I suppose, many of you are acquainted. On a calm evening it presents a very beautiful appearance; each dip of the boatman's oar is accompanied by a brilliant flash, a tremulous radiance plays round the sides of his little vessel, and a long stream of light follows in her wake. In rough weather it exhibits a spectacle of awful grandeur, every wave appears crested with light, and, as they break against the sides of the ship, look like broken masses of liquid fire. It has been observed that the sea will present this singular appearance for one night, and then the phosphorescence will disappear for five or six, and return again. This was shown by Rigaud, in the year 1770, to depend frequently on living polypuses (a species of Medusæ), about a quarter of a line in diameter, and existing at certain times in sea water in enormous quantities. The Abbé Nolet has attributed it to electricity. Others have referred it to large quantities of matter derived from animal bodies decaying in the ocean. Thus so long ago as 1665, Dr. Beale observes,—"Having put some boiled mackarel into water together with salt and sweet herbs, when the cook was some time after stirring it, in order to take out some of the fishes, she observed that at the first motion the water was very luminous, and that the fish, shining through the water, added much to the light which the water yielded. The water was of itself thick and blackish, rather than of any other colour, and yet it shined on being stirred. Whenever the drops of this water fell to the ground, they shined, and the children of the family diverted themselves with taking the drops, which were as broad as a penny, and running with them about the house."

Thus we perceive that, leaving electricity out of the question, the luminous appearance of the sea at certain times may be attributed to large quantities of living animals capable of giving off light under peculiar circumstances, or to the presence of large quantities of matter derived from animal bodies decaying in the ocean. I am inclined to adopt the former supposition for these reasons:—there are circumstances connected with this phenomenon which would appear to prove, that the production of light depends upon a vital action, for when a slight electrical shock or voltaic current is passed through the water, or when it is agitated or struck, there is an evident increase of the luminous appearance; and we perceive, moreover, that the water does not emit an uniform and steady light, but undergoes various phases of darkness and light. Humboldt, in his "Tableaux de la Nature," thinks the water of the sea owes its occasional luminous appearance to this cause, but he also maintains that it is sometimes derived from a true post-mortem phosphorescence. That light is sometimes produced as a vital secretion by living animals, is proved from the sudden obscuration it undergoes in certain insects, and from the fact that a board rubbed with a living specimen of Meduse hyso-celle becomes luminous when you pass your finger over it.

But is light never emitted under any circumstances from the bodies of animals of the higher classes? We have already seen that some species of Medusæ, and worms and flies possess this property, and we are led to inquire whether any of the mammalia ever exert a similar power. When we examine the structure of the mammalia, we find that they possess all the tissues discoverable in lower animals, and hence, reasoning from analogy, we should not be surprised to find also that they perform similar functions. Looking on the subject in this point of view, it is not exceeding the bounds of possibility to suppose that they possess those tissues which are engaged in the secretion of luminous matter; and therefore I am inclined to believe that the eyes of some animals may be endowed with a phosphorescent quality, and be capable of emitting light. A phenomenon of this kind is very rarely witnessed in man, although Homer tells us that the eyes of his hero Achilles, when under the influence of strong passion, blazed like stars; and Sir Walter Scott represents some of his characters as emitting a living light from their eyes under similar circumstances. You have probably witnessed something like this in the course of

* "Encyclopædia Britannica,"—article Light.

your own observations, and I have seen it in a gentleman who at present does not manifest any such peculiarity, but in whom when young it was remarkably distinct. In some of the mammalia, however, there seems not to be the slightest doubt of the existence of this power in the eye. Thus we find in *Loudon's Magazine of Natural History*, vol. i. p. 209, that William Baird, in a descriptive notice of a species of baboon, the lemur tardigradus, which was brought to Scotland by a friend and presented to him, says,—"His eyes are large and very prominent, almost hemispheres in shape, and very much approximated. They are of a yellowish-brown colour, and are surrounded by a circle of dark brown. They shine brilliantly in the dark, especially when animated, glowing like heated furnaces." Renger, a German naturalist, has proved that this power exists in the eyes of certain mammalia. Thus, in a species of ape called the night ape, nyctipithecus irivirgatus, he remarked the effulgence from the eyes only in the most complete darkness, and then it was so brilliant as to throw a sensible light around, so as to render objects at a distance of a foot and a half visible. Now the eye of this ape is very small, and it is impossible to conceive how the phenomenon in question could be merely the result of reflected light. In the canis azarce also, he found that the effulgence ceased immediately on dividing or wounding the optic nerve; and he observed that it was always particularly distinct and brilliant when the animal's attention was roused by some unusual noise, or by the sight of strange objects, or when agitated by some desire. I need not instance the flashes of light occasionally emitted from the eyes of cats, lions, tigers, and other animals of the same description, as this is a fact with which almost every one is familiar.

In the eyes of these animals there generally exists a particular structure, called the tapetum, which has been thought capable of aiding them to see in darkness. This explanation supposes that the tapetum forms a reflecting surface, which causes the rays admitted into the eye, and derived from external objects, to converge in such a manner, that, passing out of the eye, they are so concentrated as to produce the appearance of a flash of light emitted from that organ. It is strange that an explanation, not merely inadequate, but optically untrue, should have been generally received without a more accurate investigation. The truth is, that all the rays admitted into the eye from objects seen with any considerable degree of obliquity, after their convergence on the retina has been effected by the refracting powers of the aqueous humour, lens, &c., are mostly extinguished within that organ, and do not find their way outwards through the lens. On the other hand, the rays derived from objects seen directly, and which are in the axis of vision, will be reflected (supposing the tapetum to resemble a concave mirror placed around the extremity of this axis) in such a manner that, after refraction by the lens, they will converge to the point external to the eye, from which they had originally set out, and their tendency, after reaching this point, would be to diverge; so that in no case will the eye of a spectator see flashes of light issuing from the eye of an animal, in consequence of the internal reflection of rays derived from without. If, on the contrary, certain portions of the internal surface become luminous, as, for instance, that covered by the tapetum, then the rays derived from each luminous point will become parallel, in consequence of refraction by the lens, and so the appearance of flashes can easily be accounted for. Again, it is certain that this light depends chiefly on the will of the animal, and is most apparent when the animal's attention is roused or its passions excited. It does not appear to be possible to account for the flashes of light emitted from the eyes of several animals in the dark, by merely saying that the light has entered the eye from without and is again reflected, for we observe the light emitted to be of quite a different colour from that which is supposed to enter the eye from without. I am therefore of opinion that the power of generating phosphorescent light, enjoyed in such a remarkable degree by some of the lower animals, is also shared by those of a higher class, particularly where the tapetum exists.

There is also some reason to believe that plants sometimes give off light, although from the absence of phosphates in their composition, this circumstance must be of very rare occurrence. The strongest facts in favour of it have been put forward by Haggern, a Swedish lecturer on natural history. One evening he perceived a faint light darting repeatedly from a marigold. Surprised at such an uncommon appearance, he resolved to examine it with attention, and to be assured it was no deception of the eye he placed a man near him to make a signal at the moment he observed the light. They both saw it instantly at the same moment. The light was most brilliant on marigolds of an orange or flame colour, but scarcely visible on pale ones. The flash was successively seen on the same flower two or three times in quick succession, but more commonly at intervals of several minutes; and when several flowers in the same place emitted their light together, it could be observed at a considerable distance. This phenomenon was remarked in the months of July and August at sunset, and for half an hour, when the atmosphere was clear; but after a rainy day, or when the atmosphere was clouded and loaded with vapours, nothing of the kind could be perceived.

Haggern observed the same phenomenon in the monkshood, orange lily, and Indian pink, and thinks it is connected with electricity, developed at the moment the pollen bursts from the anthers to impregnate the pistilla.

Treviranus is of opinion, however, that the flashes of light, supposed to be seen in this and similar cases, arose from the contrast exhibited by the fiery red colour of the petals, when viewed amidst objects feebly illuminated in the dusk of the evening, and this opinion is supported by the results of many experiments. He says that some of the *subterraneous* cryptogamic plants are the only vegetables which emit light when living, although several, such as the byssus phosphorea, schistesega osmundacea, &c. emit a phosphorescent light when in a state of putrefaction.

Having said so much with respect to the influence of light on the animal and vegetable kingdoms, and having made some few observations on the production of light by both, we come now to inquire into the effects of temperature on animal and vegetable life. I shall be necesarily brief on this part of my subject, as I have already, in my introductory lecture, dwelt at some length on the manner in which both animals and vegetables struggle to avoid the injurious effects arising from extremes of heat and cold, and must reserve much of what is to be detailed on this point until we come to the subject of animal temperature. Such remarks as I shall at present make, are intended chiefly to illustrate the influence of temperature in limiting the range to which living bodies are confined.

It is unnecessary for me to speak here of the power which animal bodies possess of accommodating themselves to the different varieties of temperature, or of the degree in which this power is enjoyed by different animals. Neither is it requisite to inform you that temperature, considered with reference to its effects on bodies, varies very considerably on different parts of the surface of the earth. The two principal circumstances, by which we determine the degree of temperature, are, first, the height of any particular place above the level of the sea, and, secondly, its distance from the equator. The first is perpendicular to the surface of the earth, and we find that as we ascend a lofty mountain, or rise into the air in a balloon, for every hundred yards of elevation there is a given decrease of temperature, and if it were possible for us to continue our ascent until we rose above the atmosphere which surrounds us, we should (it is said) meet with the fixed and uniform temperature of the interplanatory space. This decrease of temperature, according to the height above the level of the sea, will explain why, even in the hottest countries, we find the summits of lofty mountains covered with vast masses of perpetual snow, and their sides presenting, in succession, the products of all climates from the poles to the equator. The other cause of a decrease in temperature, connected with the distance of the place from the equator, depends on the obliquity of the sun's rays, and the length of time during which he is either wholly absent, or visible only for a short period. Hence the immense district round the Poles, where perpetual congelation has bound up both sea and land, and where nature presents for ever to the eye a chill and lifeless waste.

We have, then, two great circumstances influencing temperature, the distance of a place from the equator, and its elevation above the level of the sea. In studying the climate of any particular part you will, therefore, take into account not merely its latitude but also its elevation. This is a matter of important consideration for persons who have gone from a cold, or a temperate, to settle in a hot, climate, for by choosing situations, frequently in the vicinity of where they reside, but more elevated and approximating in its character to the climate of their native countries, they may be enabled to enjoy a temperature more congenial to their feelings. This principle has been lately acted on in the East and West Indies, and many persons, who before found a residence there almost insupportable, are now quite reconciled to it.

These are the chief agents in the modification of temperature, viewed in a general way, but if we come to form an estimate of the temperature of any particular place, we find that other circumstances tend to produce a considerable variety of climate, even on the same parallel of latitude. Many causes, at present not well understood, exert a very remarkable influence in producing this diversity. Compare the temperature of Ireland with Canada, or any other place of the same latitude, in North America, or in the north of Europe, and you will find the difference to be very great. Here we have temperate summers and mild winters, while in those places they have a burning sun in summer and intense cold in winter. The varieties of temperature present an important subject of investigation to the physician, and it is incumbent on every man, engaged in practice, to be well acquainted with the various climates of his own country. I say climates, for not only in the same country, but even in the vicinity of the same town, a diversity of climate and temperature may be observed.

As a certain degree of temperature is essential to the support of animal and vegetable life, we perceive that nature has adopted provisions to moderate excessive heat. Air heated by the scorching rays of the sun, is, by a law originally impressed upon matter, carried up into the higher regions of the atmosphere, and its place supplied by cool and refreshing breezes. Your lecturer on chemistry will also inform you that there are certain conditions in water, which tend to produce an equality of temperature, and hence the cause of those remarkable currents which are almost constantly observed in various parts of the ocean. On these and other similar points it is unnecessary for me to take up your time, as they are sufficiently obvious, and are extensively detailed in the systematic works on chemistry.

Nature has taken extraordinary pains to protect both plants and animals from the ex-

tremes of heat and cold. With respect to plants, the precautions which are taken to avoid cold are much more remarkable than the means adopted to guard against heat. Under the influence of cold the vegetation of plants generally shrinks, and vitality concentrates itself about the roots or stem, where it is more or less protected from the influence of a chilling atmosphere. Hence in this climate, where the revolution of the seasons produces, at a certain period of the year, a considerable reduction of temperature, most plants (with the exception of several mosses and others which delight in a low temperature) cease to grow during the winter. Analogous to this periodic state of suppressed vitality, manifested by plants, is the hybernation of certain animals, which, during the winter season, retire into caverns, or sheltered situations, where they cover themselves up and fall into a state of torpidity, in which all the vital actions are carried on with diminished energy. In the Arctic regions, where the cold of winter is intense, nature has furnished most animals with an efficient protection against its influence. She has given its warm coat of fur to the bear, and has provided the whale and walrus with a stratum of blubber, whose non-conducting powers enable these animals to retain their vital warmth in a medium which would seem to be inconsistent with life. All animals, in fact, are provided with more or less covering to enable them to resist cold, and accordingly we find that where they are naturally the inhabitants of countries exposed to considerable varieties of temperature, they appear to suffer very little inconvenience during the winter. Not so man,—unprovided with any natural covering to shelter him from the chilling influence of a wintry atmosphere, he must have become, to a certain extent, an hybernating animal, had not his reason and his industry supplied him with clothing and fire to protect him from cold. Nature, for this purpose, was content with bestowing on him the compensating faculty of reason, leaving the rest to his own ingenuity and diligence.

Still, even the body of man, though unprotected by covering, is, when fortified by habit, capable of bearing a great degree of cold. If we can believe history, many nations, living in countries subject to a great reduction of temperature during the winter, were in the habit of going almost entirely naked. Such is the history of the early inhabitants of Great Britain, according to the accounts given by Julius Cæsar.

I perceive, gentlemen, my time has expired, and must defer this subject until our next meeting on Monday.

LECTURES

ON

MIDWIFERY & THE DISEASES OF WOMEN AND CHILDREN,

BY EDWARD RIGBY, M.D., F.L.S.,

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Delivered at St. Thomas's Hospital.

LECTURE XII.

Placenta continued.

GENTLEMEN,—You will recollect, I trust, from what I told you at my last lecture, that the maternal surface of the placenta presents an uneven lobulated appearance, consisting of irregular shaped prominences called cotyledons, and covered after the fifth month by a pulpy membrane, which, from its structure and appearance, has been called the placental decidua If we take a fresh placenta, the maternal surface of which is not much covered with blood, or from which blood has been gently removed by washing, and place it upon a convex surface, so as to give it, as nearly as possible, the same convexity which it had when attached to the cavity of the uterus, we find that its maternal surface presents much greater irregularities than when laid flat, as is commonly the way when examined. The cotyledons are widely separated from each other, and the sulci, which otherwise had been more or less concealed, are now very distinct. It is to these sulci which run between the cotyledons that I wish to direct your attention. On minute examination a number of openings may be distinguished at the bottom of them, of unequal size, some round, others oblong or oval, their edges thin but perfectly distinct, and with the aid of a favourable light directed into the larger apertures, you may even observe smaller orifices opening into them, much in the same way as when we look down a large bronchial tube. Some of these canals do not immediately lead to smaller orifices, as above described, but open at once into an irregular shaped cavity, in the sides of which we observe numerous small apertures, through which blood oozes into the cell or cavity, when the adjacent parts of the placenta are gently pressed upon. These cells, according to my own observations, are chiefly met with near the circumference of the placenta, but whether this be an accidental conformation or not, must be decided by further observation. Besides these openings at the bottom of the interlobular sulci, you will here and there detect others *upon* the cotyledons; these are generally smaller, their edges thicker, and, as far as I have observed, they are always round.

I have described these openings thus minutely, because their existence has been a subject of considerable discussion. If, how-

ever, you examine a placenta in the manner I have described, you cannot fail to detect them in almost every part. I own that, in some instances, whole sulci have appeared to be covered by placental decidua, without a single opening, but this is not usual. There can be little doubt but that these orifices correspond to the uterine sinuses and arteries, the extremities of which, in the unimpregnated state, open into the cavity of the uterus, but which now convey the blood to and from the placenta. From the observations of Messrs. Mayo and Stanley *, and from their examinations of the original preparations in the Hunterian Museum illustrating this subject, it appears that, in all probability, most of the large thin-edged apertures at the bottom of the interlobular sulci are connected with the uterine veins or sinuses, whereas the smaller orifices, the parietes of which are thicker, and which are chiefly observed *upon* the cotyledons, are continuations of the uterine arteries. These openings have also been pointed out by my friend Dr. Ley, in a very valuable paper published in the *Medical Gazette* for June 1, 1833. I will merly quote the passage which more immediately refers to this particular part of my description, but I strongly advise you to peruse his whole paper carefully. "The uterine surface," says Dr. Ley, "thus detached from the uterus, exhibited its lobules with their intersecting sulci, even more distinctly than they are seen in the uninjected placenta; *and in several parts could be perceived with the naked eye small apertures of an oval form, with edges perfectly smooth, regularly defined, and thicker, as well as more opaque, than the contiguous parts which they penetrated* †."

Let us now examine the internal structure of the placenta. The human placenta, as in most viviparous quadrupeds, is composed, as I have stated, of several portions or lobuli, which are called cotyledons, the only difference is, that in the former they are united into a single mass, while in animals each is separately attached to the inner surface of the uterus; nevertheless, although these cotyledons are united in the human species, you must not suppose them confounded together, or even that the vessels of the one have a direct communication with those of the other. This may be proved by repeating the experiments of Wrisberg, viz. injecting one of these lobuli, when you will find that nothing passes into the adjacent ones. The structure of the placenta, as you all know, is vascular, in fact, we may say that it consists of little else than blood-vessels, for, as yet, neither nerves nor lymphatics have been detected in its structure.

On arriving at the fœtal surface of the placenta, the umbilical vein and arteries divide into several great branches, which are situated beneath the amnion, between the two layers of the chorion, to which they are intimately connected. These vessels supply the various lobuli of which the placenta is composed, so that each lobulus or cotyledon receives at least one of these branches, for you must bear in mind, gentlemen, that although the umbilical cord consists of two arteries and only one vein, this arrangement does not continue into the body of the placenta, for there each artery is accompanied by its corresponding vein, a fact of which you may easily convince yourselves by examining the structure of a placenta, which has been injected. When the vessels have reached the cotyledons, they are divided and sub-divided, *ad infinitum*; they are connected together by a fine cellular membrane, which may be very easily removed by maceration, and you will then see the minute branches loose and floating in the water. (*Preparations of portions of placentæ, some injected others not, were sent round.*)

If we inject water, melted wax, or quicksilver, into one of the umbilical arteries, it will return immediately by the other; this results from the free anastomoses which these vessels have with each other upon the fœtal surface of the placenta. If, however, we close the artery, the injection will pass into the vein, but not until the whole placenta is injected; this, therefore, proves that there exists a free passage of blood from the arteries into the veins.

The vessels which I have described as opening upon the maternal surface of the placenta, and which, before its separation from the uterus, were continuous with the uterine arteries, communicate with the cellular structure of the placenta, and appear to terminate in minute granules, much in the same manner as the bronchial tubes do in the air cells of the lungs. It is this interstitial or cellular portion of the placenta which is filled when we inject by the spermatic arteries, and which, even in the recent state, distinctly present a granular appearance.

In the latter months of pregnancy the vessels of the placenta gradually close here and there, and especially at its external surface, and become solid fibres, which frequently contain more or less phosphate of lime, so that the edges of the placenta have a gritty feel, and, according to Lobstein's observations, it diminishes both in bulk and weight at this

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* *Medical Gazette*, 1833.

† It is due, however, to the memory of Dr. W. Hunter to state, that the existence of these orifices upon the maternal surface of the placenta was perfectly well known to him, as is proved by the following passage in his "Anatomical Description of the Gravid Uterus and its Contents." "In separating the placenta from the uterus, which is commonly practicable with the least imaginable force, all these vessels are necessarily torn through, and then each broken vessel has an open mouth upon the inner surface of the uterus, *and a corresponding orifice on the outer surface of the placenta.*"

period, a circumstance which is especially observed in animals.

So much, gentlemen, for the anatomical structure of the placenta. I think that I have laid before you sufficient data by which you will be enabled to enter upon and understand the long disputed subject of the *relation between the placenta and uterus*.

We know from daily experience that in labour at the full term of pregnancy the placenta is easily expelled from the uterus; that, upon examining the surface which had been attached to the uterus, we find no laceration, and that a discharge of more or less blood takes place some days after. We also know that when the placenta becomes detached from the uterus *during* the progress of gestation, it is followed by a considerable hæmorrhage, which greatly endangers the life of the mother and child, more especially that of the mother. These facts prove that there is a circulation of uterine vessels in the placenta, which is destroyed upon its being separated from the uterus.

The question, therefore, is, how this circulation is carried on, and what is its relation to that of the fœtus. Different opinions have been entertained by physiologists upon this subject; some have asserted that there is a direct communication or anastomosis between the uterine vessels and those of the placenta; in confirmation of which the fœtus is said to have been bloodless in cases where the mother has died of hæmorrhage; and indeed the fact of hæmorrhage always following total or partial detachment of the placenta has been supposed to prove this; the experiments, however, of modern physiologists completely controvert these arguments. Wrisberg found, in the case of a woman in the seventh month of pregnancy, who had died from loss of blood, that the heart and blood-vessels of the fœtus were gorged with blood, while those of the mother were quite empty; he killed several cows big with calf by a wound through the heart, and never found that the blood vessels of the fœtus were deprived of blood.

Ruysch, Monro, Haller, Wrisberg, Meckel, &c., &c., have never succeeded in making injections pass from the uterine into the fœtal vessels. No anatomist has injected so many gravid uteri as the late Dr. William Hunter, but he was never able to fill the fœtal vessels from those of the mother; Lobstein has tried repeatedly, and with the same result. According to the observations of William and John Hunter, the placenta consists of a maternal and fœtal portion. "It appears incontestable," says Dr. W. Hunter, "that the human placenta, like that of the quadruped, is composed of two distinct parts, though blended together, viz. an umbilical, which may be considered as a part of the fœtus, and a uterine, which belongs to the mother; that each of those parts has its peculiar system of arteries and veins, and its peculiar circulation, receiving blood by its arteries, and returning it by its veins; that the circulation through these two parts of the placenta differs in the following manner,—in the umbilical portion the arteries terminate in the veins by a continuity of canal, whereas in the uterine portion there are intermediate cells into which the arteries terminate, and from which the veins begin."

Hence, gentlemen, although the various observations, anatomical injections, &c., show that to a certain degree there is a communication between the uterus and the placenta, inasmuch as that the blood of the former is received into the sinuses or cells of the latter, still we possess no proof that the blood can pass from these sinuses into the umbilical vessels; on the contrary, every thing serves to convince us that the circulation of the blood of the fœtus is entirely and altogether independent of that of the mother.

Dr. W. Hunter has repeatedly had occasion to remark that two differently coloured fluids injected into the uterine and umbilical vessels undergo no admixture with each other. It has been supposed by a modern author, that the Hunterian injected preparations of the placenta were the results of rupture and consequent extravasation; but, even setting aside an impartial examination of these preparations, which leads to a very different conclusion, we need only refer to the works of these two distinguished anatomists to see how anxious they were to prevent any chance whatever of such being the case. The following observation of John Hunter not only shows this, but also serves to illustrate the independence of the fœtal and uterine circulations in the placenta.

"The substance of the placenta, now filled with injection, had nothing of the vascular appearance, *or that of extravasation*, but had a regularity in its form, which showed it to be a natural cellular structure fitted to be a reservoir for blood *."

The maternal part of the placenta, therefore, consists only of the uterine vessels, which carry their contents into the cells of the placenta; this may be seen in every placenta which has been expelled from the uterus at the full term of pregnancy. In this state the placenta presents the appearance of a spongy mass, gorged with blood, which may be removed by washing or maceration, and if we inject a placenta thus prepared, the injection will pass with the greatest facility from the umbilical arteries into the vein, but not one drop into its cellular structure. It is evident, therefore, that the blood which had filled the intervals between the vessels, and which had been removed by washing and maceration, could not have belonged to the fœtus, but must have come from the mother, for if any of the vessels had been ruptured the injection would not have succeeded. The manner in

* Observations on Certain Parts of the Animal Economy.

which the cells of the placenta are supplied with blood from the mother, has been admirably described by Mr. Hunter. "The arteries of the uterus, which are not immediately employed in conveying nourishment to it, go on towards the placenta, and, proceeding obliquely between it and the uterus, pass through the decidua without ramifying; just before they enter the placenta, making two or three close spiral turns upon themselves, *they open at once into its spongy substance*, without any diminution of size, and without passing beyond the surface as above described. The intention of these spiral turns would appear to be that of diminishing the force of the circulation as it approaches the spongy substance of the placenta, and is a structure which must lessen the quick motion of the blood in a part where a quick motion of this fluid was not wanted; the size of these curling arteries at this termination is about that of a crow's quill *."

In this manner, gentlemen, the umbilical vessels of the fœtus are always, as it were, bathed in blood; there is the same relation between these vessels and the maternal blood of the placental cells or sinuses, as between the internal carotid and the blood of the cavernous sinus, or, still more strikingly, between the branches of the pulmonary artery and the air which fills the bronchial cells.

By a knowledge of these facts we can explain many of the phenomena during gestation, and during as well as after labour. We can now understand why the fœtus is not deprived of blood when the mother has died from hæmorrhage; we can explain the cause of that discharge, viz., the *lochia*, which continues for some days after delivery, &c. &c.

With respect to the umbilical cord, this does not possess the same form at every period of gestation; the younger the embryo is, the shorter and thicker is the cord. In the earlier months of pregnancy, the vessels of which it is composed pass from the fœtus in a straight direction, whereas, towards the end of pregnancy, they become more or less spiral, generally winding from right to left. Besides the umbilical vessels, the cord contains at this early period the duct of the vesicula umbilicalis, and the urachus or duct of the allantois, together with some of the convolutions of the intestines. The vessels of the umbilical cord are enveloped in a viscid substance, which, upon minute examination, will be found to consist of a very fine cellular tissue containing an albuminous matter, which slowly exudes when pressed upon by the fingers. The cellular structure itself may be demonstrated by the inflation of air or injection of mercury; it seems to accompany the umbilical vessels as far as the posterior surface of the peritoneum; and Lobstein is of opinion that it is a continuation of the cellular tissue which covers this membrane. Externally, the umbilical cord is covered by a membrane which is a continuation of the amnion; in some places it is very thick and strong, and not easily ruptured.

The existence of the umbilical cord cannot be ascertained until the end of the first month, for, till that period, the embryo appears to rest directly upon the amnion. From the time of its commencement to the end of gestation it gradually becomes longer, so that, on an average, it is about two feet long at that period. It is a remarkable fact, that the cord, which at the end of pregnancy is about the same length as the fœtus, should, during the sixth month, be relatively much longer; hence we may conclude, that, in those rare cases where knots have been found upon the cord, the knot must have been formed at an earlier period, although, until the time of labour, it was not drawn so tight as to endanger the child's life.

Having thus described the manner in which the placenta and umbilical cord are formed, and the changes which they undergo from the commencement of their existence till the end of pregnancy, we will now, before quitting this subject, briefly consider the functions which these parts perform. From the various researches upon the structure of the placenta, and from what I have told you respecting the relation between the fœtal and maternal parts, it may be asserted, on good grounds, that the fœtal blood, during its circulation through the placenta, undergoes a similar change to that which the blood does in the lungs of the adult. The function of the placenta in the latter months of pregnancy are no longer what they were at the commencement of this process; the means, also, by which the fœtus is nourished vary with the different periods of gestation. The *vesicula umbilicalis*, which is a small vesicle attached to the fœtal extremity of the umbilical cord, and which exists only during the first two months, appears to afford nourishment to the fœtus at this early period. Like the seed which, when buried in the earth, shoots forth its two fleshy succulent leaves as the first germ of the plant which is soon to spring up, and nourishes them upon the saccharine juices which its cotyledons afford, until by the formation of roots it is enabled to absorb sufficient nutriment from the surrounding soil to support the rough fibrous leaves of the future plant, so in the present case the first traces of the human embryo are nourished by the fluid which the umbilical vesicle contains, and which appears to be designed for its nourishment at this period, until, by the formation of the venous absorbing radicles of the chorion, and afterwards by the absorption of liquor amnii, which, during the first half of pregnancy contains a considerable quantity of albumen, it is enabled to absorb and assimilate such fluids as are best suited for its growth and development. The vesicula umbilicalis is of a somewhat globular form, lying between the chorion and amnion, and relatively larger

* Observations on Certain Parts of the Animal Economy.

than the embryo the younger it is: in the very earliest periods it even exceeds the embryo in size, and in all probability exists prior to it: at first it reaches close up to the anterior surface of the abdomen—in fact, it is in immediate contact with it. At an early period, even during the first month, it gradually recedes from the embryo, so that in the second month it lies external to the sheath of the umbilical cord *.

But little is known respecting the first development of the vesicula umbilicalis. From the analogy which it bears to the yelk bag of birds and reptiles, it may be inferred, that this part of the ovum is the first which is developed, and that the empty eggs, which not unfrequently occur, and which are known in the country by the name of *wind eggs*, are mere vesiculæ umbilicales, and not the chorion and amnion, as has generally been supposed.

The uniform appearance of the vesicula umbilicalis, and the considerable relative size which it possesses at an early period, together with its probable existence before the other parts of the ovum, prove of what importance it is in the early development of the embryo. Its function, as I have already mentioned, seems to consist in supplying the embryo with nourishment during the very early periods of its existence; and this opinion is rendered more than probable by the researches of the late Dr. W. Hunter, which have been confirmed and followed up by Meckel of Halle and Oken of Munich. Dr. Hunter observed, that a small duct was continued from the vesicle to the navel string, containing the same sort of white fluid as the vesicle itself, which may be pressed backwards and forwards by the point of a needle. A direct connexion between the vesicula umbilicalis and intestine has not as yet been proved, although there is every reason to suppose that at one time their parietes are in contact; but Needham, Blumenbach, and Sömmering, have shown it to be the case with the yelk bag of birds; and Meckel has been able satisfactorily to demonstrate the existence of this communication in the young of the shark;—the fact, nevertheless, has been denied by Emmert, Hochstetter, and Cuvier.

The umbilical vein exists for some time previous to the umbilical arteries, and seems to perform an office in the fœtus similar to that of the thoracic duct at a later period. Its radicles, or absorbing extremities, appear to absorb a milky fluid, which, after the first two months, is found in the placenta, and which must be looked upon as a means of nourishment which does not exist in the later months. This milky fluid was noticed by Leroux, who even then expressed his doubts whether the radicles of the umbilical vein receive the blood from the mother, or whether they only serve *to absorb a white fluid which resembles chyle*. Some curious observations upon this subject were also made by Dr. Young, of Edinburgh, in his Lectures on Midwifery. "There is evidently," says he, "in the placenta, besides blood-vessels, some other substance which serves to absorb juices from the uterus, and to convert these into a chylous matter proper to nourish the fœtus, and this chylous matter is absorbed by the umbilical veins. This seems to be proved," says Dr. Young, "from the consideration of the placenta of animals which have cotyledons, for, upon squeezing these glandular substances, we force out a sort of chylous liquor, and these are surrounded by the placentæ, which absorb their liquor and convey it to the fœtus *."

The absorbing power of the umbilical vein continues till the fifth month; towards the seventh month the body of the fœtus becomes covered with the *vernix caseosa*, so that in the eighth and ninth months the absorption of the liquor amnii by the skin is impeded and considerably diminished. The vernix caseosa is a viscid, fatty matter, of a yellowish-white colour, adhering to different parts of the child's body, and in some cases in such quantity as to cover the whole surface. In the sixth plate of Dr. Hunter's Anatomy of the Gravid Uterus, which I here show you, the vernix caseosa is very distinctly seen upon the child's body: it seems to be a substance intermediate between the fibrine and fat, having a considerable resemblance to spermaceti. From the known activity of the sebaceous glands in the fœtal state, and from this smegma occurring in greatest quantity about the head, armpits, and groins, where these glands are most abundant, there is every reason to consider it as being secreted by the sebaceous glands of the skin during the latter months of pregnancy.

Since the relative growth of the fœtus in man, as in animals, is more considerable in the earlier months of gestation, in like manner are its sources of nourishment at that period more abundant: towards the end of pregnancy the rapidity of its growth diminishes; its nourishment becomes also more sparing. In order to develope the various organs during the commencement of fœtal life, nature requires more ample means of nourishment; this, however, ceases to be the case towards the end of pregnancy. The fœtus also requires less nourishment, since it sustains no loss by cutaneous perspiration, by the kidneys, or intestines. It receives sufficient aliment by the lymphatics of the skin, by the mouth and nose, to support its growth, which is now very slow and gradual.

At my next lecture, gentlemen, I shall proceed to the subject of the fœtus itself.

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* Lobstein: Essai sur la Nutrition du Fœtus.

* M.S. Notes of Young's Lectures, by the late C. H. Parry, M.D.

LECTURES
ON
FORENSIC MEDICINE,
DELIVERED BY
DR. HAY GRAHAM,
At the Westminster School of Medicine.

LECTURE XI.

Hermaphrodites, or Doubtful Sex.

Gentlemen,—I now proceed to speak of hermaphrodites, or persons of doubtful sex. The word hermaphrodite is compounded of two Greek words, the one Ἑρμῆς, which is the Greek name of Mercury, and the other Ἀφροδίτη, which is Greek for Venus. Hermaphroditus was, according to the Greek mythology, the son of Venus and Mercury. When about 15 he set out on his travels to see the world; one day, whilst bathing in a fountain, Salmacis, the nymph of the fountain, fell suddenly in love with him, and attempted to seduce him, but Hermaphroditus remained insensible to the warmth of her passion, and deaf to her urgent entreaties. Upon this Salmacis embraced him closely, and entreated the gods to make them two but one body. Her prayers were heard, and Salmacis and Hermaphroditus, now two in one body, still preserved the characteristics of both their sexes.

Thus the term hermaphrodite became applied to all such persons as were supposed to combine in themselves the organs of generation of either sex, and were therefore supposed to be capable of performing the functions proper to each, both of impregnating and of being impregnated, the receptio et emissio seminis, of begetting or of conceiving.

This, gentlemen, is perfectly consistent with nature, and actually takes place at one and the same time in snails and other molluscous animals. But whether it ever takes place in the higher orders of vertebrated animals, especially in man, is the subject of present investigation.

Hermaphroditism is connected with forensic medicine, inasmuch as it is sometimes of great importance to ascertain the sex of a child, which has died shortly after birth, not only as regards the right of a father to hold real property, as tenant by the courtesy of England, but also as respects the law of descent, "for if a woman be tenant in tail male, and have only a daughter born alive, the husband is not thereby entitled to be tenant by the courtesy, because such issue female could never inherit the estate thus limited in tail male; and it is, therefore, the professional duty of every accoucheur, or medical attendant, at the time of a birth, very carefully to observe and note in a general book the sex of every child delivered in his presence, as the same, especially if it admit the receipt of his professional remuneration, may even, after his death, be received as evidence of the fact."—*Chitty.*

Therefore you perceive it might become an important question in law, both as respects the father's claim to hold land as tenant by courtesy, and also as respects the reputed hermaphrodite's claim to hold land descending in tail male: in addition to this it might also become of great importance in a question of nullity of marriage.

In prosecuting the consideration of this subject the cases of hermaphroditism may be reduced to four heads; viz. 1st. Malformations of the male. 2nd. Malformations of the female. 3rd. Those in which there is a fusion, or re-union of the organs of either sex. And 4th. Those in which there is an absence of the organs of either sex.

1st. The apparent hermaphroditism of the male generally proceeds from an organic malformation of the scrotum, which about the *raphe*, or middle part, has a slit, or fissure, formed by two folds of the skin, presenting the appearance of the lips or labia of the vulva, especially when the testicles have not descended, but have remained in their embryotic position, or behind the inguinal ring. This greatly resembles and is indeed a similar malformation to hare-lip. Sometimes this fissure consists merely of a deep indentation of the raphe. The resemblance to the vulva, or opening into the vagina, is frequently increased by the smallness of the penis, which in some instances is bifurcated, and sometimes there is merely a groove, where the urethra ought to be; at other times it is imperforated, so that the urethra opens elsewhere than at the extremity of the gland, or of the body, which represents it; and, in some cases, there is even a communication between the rectum and the penis, or the scrotum.

2nd. The apparent hermaphroditism of the female admits of two varieties;—the first consists of the excessive growth and dimensions of the clitoris, but which, by the way, is in no case perforated by the urethra. The other consists in a malformation of the uterus and vagina, which conformation gives the uterus some resemblance to the penis; but, in such a case, there is a prolapsus of the uterus, and this prolapsus causes the uterus to project beyond the external parts of generation, and it being thus always exposed to the action of the air increases the illusion, by losing its own natural colour and appearance, and acquiring that of the integuments of the penis. This apparent hermaphroditism is generally brought on by disease, and is remedied when the prolapsus is reduced.

3rd. Apparent hermaphroditism from the fusion or re-union of the generative organs of either sex, is that which approaches the nearest to real hermaphroditism. This is the most rare, and although it is sufficiently well established by numerous facts, yet in no case has it furnished an example where the development of the attributes of the two sexes has

been sufficiently perfect to endow the same individual with the faculty of impregnation and of being impregnated, as is the case with snails and some other animals.

4th. Under the genus hermaphroditism, or doubtful sex, is to be classed that species of malformation where there is an entire absence of those organs essential towards generation. Individuals with this defective organisation would appear originally to have been intended to belong to the male sex, where the organs of generation have never been developed, but have remained either in their embryotic state, or have been arrested in their evolution. Thus, instead of a penis there is merely an imperforated fleshy excrescence, the rudiment of a penis; the testicles are either altogether wanting or reduced by atrophy to the smallest volume; the external appearance of these individuals is neither that of a man, nor yet that of a woman; often there is an intermingling or fusion of the general character of both sexes, whilst in others there is a slight predominance of one sex over the other, but this is rather indicated by the propensities than by the physical characters of the individual.

I shall not, gentlemen, occupy your time by entering fully into the subject before us, and detailing to you all the cases of hermaphroditism, which have been collected by various authors, who have written on the subject, or which are of more recent occurrence, but merely illustrate what I have laid down, by the selection of a few of the best marked cases. I shall, therefore, for your more easy remembrance, take them in the order of the sub-division I have submitted to you.

Albert mentions the case of a youth, where two tumours appeared in the private parts, on cutting through the skin the testicles and penis were exposed to view, so that he became capable of coitus, married, and had a family. The ancients termed those individuals "gynandic," who from apparent women became perfect men. Pliny makes mention of many of these singular metamorphoses. Lucinus Muliamus saw at Argos a person, named Arescon, who had previously been married as a woman, under the name of Arescusa, but that, in the course of time, the beard and the member of virility appeared, when she ceased to be a woman and became a man. He also reports, that at Smyrna he saw a girl turned into a boy. And I, adds Pliny, saw myself, in Africa, one Lucius Cositius, a citizen of Visdrita, who from being a woman was turned into a man on her wedding night. St. Augustine makes mention of a virgin who was changed into a young man, and taken to Rome in the time of Constantine. Antoine du Pinet cites several cases of young women who became men, amongst others two girls, aged 15, and also another case of a bride, who, to the astonishment of her husband, became a man on her bridal day. Pitscottie, in his History of Scotland, relates a similar case:—"In the year 1459 there was a bairn which had the kinds of male and female, in whom man's nature did prevail; but, because his disposition and protraiture of body represented a woman, in a man's house of Linlithgow he associated in bedding with the good man's daughter of the house, and made her to conceive a child, which being divulgate through the country, and the matrons understanding this damsel deceived on in this manner, and being offended that the monstrous beast should set himself forth as a woman, being a very man, they got him accused and convicted in judgment for to be burnt quick for this shameful behaviour."

The celebrated Ambroise Paré cites the following cases:—Amatus Lusitanus reports that, in the village of Esquina, there was a maid named Maria Pateca, who, at the period of puberty, when the menses were expected to flow, had suddenly a penis and the male organs of generation developed, which before that time lay concealed and covered, so that of a woman she became a man. He afterwards married, but remained beardless.

Anthony Loquerreux relates a similar case of a man who was taken for a woman until the fourteenth year of his age, when one night as he played wantonly with a maid who laid in the same bed with him, his members, hitherto lying hid, started forth and unfolded themselves.

Paré saw at Vitry-le-François the famous Germain Marie, or Germain Garnier, who from a young woman became a young man. When she was fifteen years old, being one day obliged to jump across a ditch, she suddenly found herself furnished with the parts of generation of a man; weeping bitterly she returned home, complaining to her mother that her entrails had burst forth. Cardinal Lenoncourt, after the necessary examination, called this new-made man "Germain," and ordered him to assume the habits of his sex. Montague, in passing through Vitry many years afterwards, saw this man, then much advanced in years, and says he heard a song, very common amongst the young girls of the neighbourhood, in which they warned each other to take care what strides they made and how they stretched their legs apart, lest, from being girls, they should become boys, like Marie Germain.

Foderé relates the case of a sailor, where the male organs of generation were apparently imperfect; the scrotum was separated in the direction of the raphe for about two inches, this slit was funnel-shaped, the end of the finger could be easily introduced, and was constantly moistened by a secretion of mucus. The young man was about five feet high, the skin soft and white, he had but little beard, his breasts were developed like those of a young girl of sixteen, firm and round; his hips were wide, his thighs thick, and his knees inclining inwards. He was discharged the service.

Orfila mentions a child, in the year 1792,

who was baptised as a girl by the name of Marie Marguerite. When arrived at puberty two tumours appeared at the inguinal ring; these were repressed by a double truss, which caused such acute pain that it could not be continued in use; the two ovoid bodies which caused these tumours descended into the scrotum. When nineteen, Marie was about to be married, but her parents wished her to be previously examined by a skiful physician, since the surgeon who attended her for the tumours had spread a report that she was injured in such a way as to render her incapable of contracting marriage, The medical man, Doctor Worbe, who was engaged to examine the parts, decided that she belonged to the *male sex*. This decision was confirmed in 1813, after being examined by three other physicians, and Marie was declared to belong to the male sex, and ordered to lay aside her female dress.

Doctor Worbe gives the following account of this individual at the age of twenty-three: —"His hair and eyebrows were of a light-brown, a downy beard appeared on the upper lip and chin, the tone of voice was dull and sonorous, about five feet high, the skin very fair, and the constitution robust; the limbs were round, but full of muscle, the pelvis resembling that of a man, the knees were not inclined inwards, the hands and feet were large and strong. Thus far Marie had the appearance of a man; but the breasts resembled those of a young woman, except that they were pyriform and did not appear to be glandular, and the papillæ were compressed. The pubis was covered with hair of a lighter colour than on the head.. On separating the thighs there was discovered a longitudinal slit; the folds of the skin which formed it were closely drawn together. None of the male organs of generation appeared on the outside of this slit or *sulcus*. On carefully examining the parts with the hand, one might distinguish two bodies, each suspended to a cord issuing from the sub-pubic ring of the abdomen; that on the right was larger and descended lower than the one on the left. There could be no doubt but these bodies were real testicles, each suspended by its spermatic cord. On separating the lips of this species of vulva, we observed an impervious gland; it was small, and in appearance resembled the extremity of a middling-sized finger. Beneath this fleshy excrescence there was a grooved canal which terminated about an inch and a half from the margin of the anus. This opening, which was grooved like a pen or a tooth-pick, from behind forwards, was the *external orifice of the urethra*. From hence it appears that, in this subject, the scrotum was separated into two compartments, each of which contained a testicle; that these uncontestable proofs of virility were the tumours which the surgeon mistook for inguinal hernia, and that the penis was imperfect; in short, it was a case of very complicated *hypospadias*.

Hypospadias, from the Greek ὑποσπαδίας, from ὑποσπάω, subtraho, ὑπὸ sub, and σπάω, traho, is that malformation where the urethra, instead of terminating at the extremity of the glans penis, opens lower down, as at the insertion of the penis, or in the perinæum. In such a case the penis is always drawn down and bent on its inferior surface, from whence the name.

There are other cases, without hypospadias, where the scrotum appears slit, and more or less resembles the opening of the vagina. This slit proceeds from a very considerable depression of the raphe, which, to a superficial observer, may lead to the mistake; but, on examination, we may speedily satisfy ourselves that it is merely a cul de sac situated between the rectum and the bladder.

Sometimes the opening of the urethra on the glans penis is so formed or configurated as to resemble in miniature the external organs of generation of a woman.

Such, gentlemen, are the malformations of the male organs of generation; those of the female, which we will now proceed to investigate, arise either from the excessive growth of the clitoris, or from a prolapsus uteri.

Béclard gives the following account of Madame Marie Madeleine Lefort. This young lady was sixteen years old, and, in appearance, belonged to the male sex as far as related to the proportion of her body, her limbs, her shoulders, and her pelvis, both in form and in dimensions, in the size of the larynx, the intonation of the voice; also in the growth of hair on the surface of the body, and in the form of the urethra which was continued considerably beyond the symphysis pubis. Yet, upon attentively examining the organs of generation, it was clear she belonged to the female sex. The mons Veneris was prominent, round, and well covered with hair. Beneath the symphysis pubis was a *clitoris*, which, in form, perfectly resembled a *penis*, in a state of flaccidity. It was about two or three inches long, but the length was increased when in a state of erection. It was furnished with an impervious gland, grooved underneath by a channel, in the lower part of which there were five small holes placed regularly along the median line. Lower down and behind the clitoris the opening of the vagina presented itself; the labia were narrow, short, thin, and covered with hair; they did not contain any testicles, and extended to within nearly an inch of the margin of the anus. Between the labia there was a very superficial fissure; on pressing this there was an indistinct sensation of a cavity in the front of the anus. At the root of the clitoris there was a foramen or round opening; a sound introduced into this opening did not lead into the bladder, but was easily directed towards the anus, parallel to the perinæum, and one might then raise up or stretch the bottom of the vulva, and could ascertain that the membrane which united the labia was about twice the thickness of the

skin, and equally as dense. Directing the sound upwards and backwards the uterus was discovered. This young lady has menstruated from the age of eight; she experienced an inclination for the male sex, and would willingly submit to a slight operation to open the vagina, which might be easily accomplished. The urethra being prolonged under the clitoris, a malformation extremely rare, increased its resemblance to the penis.

Sir Everard Home relates an instance of a negress aged 24 years. Her breasts were flat, voice rough, and countenance masculine; the clitoris was two inches long, and in thickness resembled a thumb: it was of a red colour, and more pointed than a penis: not flat below, and having neither prepuce nor perforation. When handled it became half erected, and was then three inches long, and much thicker than before. On voiding her urine she was obliged to lift it up, as it completely covered the orifice of the urethra. The other parts of the female organs were found to be in a natural state. It is to be remembered, that in warm climates the clitoris frequently acquires an undue size, especially amongst negresses, so that in Africa it is usual in young girls, previous to puberty, to have this part removed; and those who perform this operation travel about from town to town, announcing their arrival like pig gelders in England. It ought not to be forgotten, that the clitoris in newborn children is frequently very large, and might sometimes lead to a mistake in the sex.

CLINICAL REMARKS,

BY ANTHONY WHITE, ESQ.,

PRESIDENT OF THE ROYAL COLLEGE OF SURGEONS.

Burns and their Cicatrices.

Persons, after burns affecting moveable parts, are sometimes rendered most deplorable objects, in consequence of the cicatrix uniting those parts together. I remember a young gentleman at the Westminster school, who, one 5th of November, had his pockets full of fireworks, squibs, crackers, Roman candles, blue lights, Catherine wheels, and, indeed, all sorts. By some accident these ignited, and he soon became himself one immense firework; in this condition he ran about Dean's Yard, until by some means the flames were extinguished. The skin of the shoulders, chest, abdomen, prepuce, scrotum, and the thighs, was completely burnt, and he was a year and a half recovering. As he got better, the skin of the abdomen contracted adhesions with the thighs, and he would have been bent double, had it not been prevented by strapping him up upright. The adhesions became elongated on either side, and still exist; he is now a young man, and, in consequence of the prolongations of cutis from the abdomen to the thigh on either side, the genital organs have all the appearance of being set in the recess of a Gothic window. The rete mucosum of the pubis being destoyed, no hair has grown on that part.

Congenital Malformation of the Sterno-Cleido-Mastoideus.

I saw to-day a young lady on whom I divided the sterno-cleido-mastoideus when she was a little girl. One of these muscles was naturally considerably shorter than the other, so that her head was constantly carried on one side. I therefore divided the shorter muscle, and it appeared to fly up behind the ear, where it was lost. The first effect was rather curious; the head acquired a nodding motion, but she soon became capable of moving it properly. Of late, however, it has assumed rather an extraordinary character; the muscle which had been divided and disappeared, seems to have come down, and united with the other portion, so that the old complaint has returned.

Passing the Catheter.

In many cases in which I have experienced difficulty in passing an instrument into the bladder, I have succeeded in overcoming the obstacle, by carrying the handle of the catheter or bougie to the left side, and then passing the instrument steadily onwards.

Mr. White exemplified this observation by passing a catheter in a case of stricture of many years' standing, in which various attempts had been made by other parties unavailingly.

Hæmorrhage from Varicose Veins.

The best way to arrest hæmorrhage from the bursting of varicose veins, is to apply direct pressure upon the part; the horizontal position alone is not sufficient. There was a woman in the Vauxhall-road who died from the sudden rupture of a dilated vein, the bystanders not knowing how to prevent the bleeding.

If blood be drawn from a varicose vein in the leg, as is sometimes recommended, it will be found that it will flow as readily as from an artery, and, to arrest it, it is necessary to apply pressure *above* the opening as well as directly upon it, because the valves of the vein being imperfect in their action, regurgitation of the circulating fluid will take place.

Reviews.

An Essay on the Use of the Liquor Potassæ and Liquor Alkalinus in the Treatment of Malignant Cholera; with Notes and Cases. By Henry Wilkinson Dodd, M.R.C.S.L., &c. &c. Durham. Pamphlet, 1834. Highley.

A few weeks ago we reviewed a pamphlet, published by Mr. George, in which he endeavoured

to prove that cholera, under its most malignant aspects, was curable,—could be cured. By what measures? By liquor potassæ in the dose of twenty minims tertiis horis, in combination with simple aromatics. In that review we doubted the cases being *cholera*, we regarded them as simple forms of congestive fever, and therefore logically inferred, that liquor potassæ was not a specific for cholera. But alas! another giant stalks abroad, and announces that he, forsooth, has discovered a remedy for cholera, the same remedy as that vaunted of by Mr. George, liquor potassæ in thirty minim doses. In addition, however, and to avoid perhaps the charge of copyism, he appends a new formula of alkaline medicine, viz. "liquor alkalinus," nevertheless regarding the liquor potassæ as the chief ingredient. The prescription is "Liquor. potassæ, ʒviij.; Liquor. sodæ, ʒxij.; Spts. lavandulæ co., ʒiv. Misce." Would that such simple remedies could invariably produce such potent effects as they appear to have done in the practice of the author.

Scepticism at the present day is an error, dubiousness is an error, truth is a libel, and man, all intelligent man, is encompassed by dense and impenetrable fogs and vapours. There is one conclusion which we may safely arrive at, that there is no antidote to cholera. Wrangle as we will, to this conclusion we must ultimately arrive.

Outlines of a New System of Philosophy; being a View of the System of Sciential Medicine, or Medicine (and all Human Knowledge) as proveable as Geometry. By Thomas Eden, M.R.C.S. Pp. 262. 1834. Effingham Wilson.

Mr. Eden should have recollected the maxim of Pope, that

"We think our fathers fools, so wise we grow:
Our wiser sons, no doubt, will think us so."

If he had but done this he would have been more chary of his epithets, and less severe in his condemnations of all that is or was in existence in medicine.

The book contains a series of assertions from beginning to end—assertions which mean nothing, and which are clothed in the most pedantic, aye, barbarous, phraseology. It is purely unintelligible, or, at least, we cannot comprehend its meaning—scarcely one of its sentences; nor do we believe the author understood what he was writing. He seems to have taken Johnson's Dictionary, selected the longest words it contains, cut them out with his scissors, mixed them, though roughly, in his mortar, and sent them to his printer to "insert them as they arise." We shall now interest or amuse our readers with a few extracts from the book before us. The first is a fair specimen:—

"In sciential medicine every individual truth is reducible to — connectable with — foundable on—its first truth, and every individual truth in the science can be showed to be a truth as assuredly as its first truth is a truth. And the first truth of sciential medicine is reducible to — connectable with — foundable on — any and every truth of any and every other science; and the first truth of sciential medicine can be showed to be a truth as assuredly as any truth in any other science is a truth. Thus, through its first truth, any truth in sciential medicine is reducible to—connectable with — foundable on — any other truth in any other science; and thus every truth in sciential medicine can be showed to be a truth as assuredly as truth exists, or as assuredly as men can know. Compare the narrow bunglings of geometry to that of the three phrases I have used—as knowledge is a net, the best fitting is 'connectable with.'" —p. 162.

A pretty specimen of the author's logic this is. The following is another precious piece of logical reasoning:—

"You cannot prove a *liability of a liability of a liability*, till you can prove in the future till you can now think in future time. And as acting by necessity after a motive is formed is very different from being under necessity before the motive is found, the doctrines of free will and necessity are complicated with a like predicament."—p. 221.

The next extract will suffice:—

"By demonstrating from the evidence of sense, human testimony, &c., sciential medicine proves without assuming any technical definition; and by demonstrating universals, &c., sciential medicine proves all which geometry takes by postulates or assumes by axioms. And, as sciential medicine's first position is in truth connected, and in exhibition connectible, with every truth in the world (its first position is of the net, that mesh, or rather string, which is first pointed to), sciential medicine's first position is on demonstration; and as some of sciential medicine's manners of demonstrating are applicable to every truth, sciential medicine demonstrates the whole of human knowledge without the use of either an improved definition, a postulate, or an axiom."

In a marginal note is the following:—

"Sciential medicine cannot demonstrate in one word or two words, but claims the privilege of uttering, without ceasing, as many words as are necessary to its demonstrations."

Really, a second Daniel come to light! A most extraordinary genius—one which can make incomprehensibility incomprehensible, liability a liability, subjects of the greatest moment ridiculous, and create madness out of folly! We have read, or rather *looked*, over the book; for we defy the prisoner in the most gloomy dungeon, deprived of all other works, to read the present. That we might not be subjected to the charge of hypercriticism in not allowing the author any credit for his elaborate work, our excuse must be, that we cannot do so conscientiously, and, also,

that we have given the best parts of its contents. He possesses talent, but it is talent of a curious kind—a compound of imagination and absurdity. We hope never to meet the author again, unless it should be at "Philippi."

On Mental Derangement; its Causes, Symptoms, and Treatment. By J. A. Gaitskell, M.D. Bath. Pp. 104.

Amidst the multitude of disorders afflicting frail humanity, there are none that absorb our attention, or excite our liveliest interest, more than those assailing the mental faculties. We maintain, with the confidence of conviction, that the bed-side of sickness is the best school of metaphysics. The connection of that mysterious essence which we call mind is so intimate with the body, that nothing which affects the one but makes a sensible impression on the other. Hence it is that this reciprocity of influence is never better manifested, or comes more advantageously under cognisance, than in the chamber of sickness.

But though ages have succeeded ages in multitudinous rotation, man remained during the lapse of many centuries in perfect ignorance of the mutual dependence of mind and matter on each other, and was totally unconscious how much the healthy state of the one modified the sane condition of the other; and thus it was that certain derangements of both mind and body came to be ascribed to possession—the possession of some demon.

More enlightened views, the progressive improvement of the sciences, and with this the dissipation of error, and of that child of ignorance, superstition, have so corrected our reasonings on, and guided our investigations into, these important matters, that in no department of medical science, perhaps, has knowledge made more satisfactory progress in modern times, than in the elucidation of the diseases of the mind.

We may safely cite the present work under review in exemplification of the fact, for though the author has added nothing new to what is already known, he, nevertheless, has treated the subject in a very sensible and creditable manner.

The author commences with pointing out the various degrees of mental alienation, from its simplest form, in which there exists the smallest possible deviation from right perception or from right judgment, to that in which both the one and the other are strongly and simultaneously perverted.

Sometimes there is erroneous perception without defect of judgment, which may extend to many objects, or be confined, as most commonly is the case, to a single object.

"One individual may imagine his legs made of glass, another imagine himself a teapot, and each takes suitable precautions with judgment, to avoid fracture in the one case, and a boiling tea-kettle in the other. One individual imagines himself a king, another that he is inspired, and, if they do not comport themselves with a dignity becoming their imaginary stations, it is only because they have not been suitably educated. Every one knows glass is brittle, and that boiling water will scald; therefore in the two first instances the only ridiculous circumstance consists in the wrong perception; in the two latter there is this additional cause of ridicule, that the unfortunate individuals assume a rank and office they could not fill with grace or dignity, were they really what they pretend to be.

"Similar in degree is *wrong judgment, the perception remaining correct;* as when an individual fancies himself able to fly he ascends to the top of one house, and attempts to fly to another, or a tree, or to some other object, more or less distant. He perceives very clearly his height from the ground, and his distance from the object to which he intends to fly, but his judgment has miscalculated his means, and he falls.

"*The fourth degree is, when both perception and judgment are erroneous;* for instance, an individual meets with some misfortune, which his erroneous perception distorts or magnifies in a most extraordinary manner; and, his judgment being likewise erroneous as to the means of overcoming or meeting his misfortune, he commits suicide. Another individual studies, or rather misstudies scripture, that at length he believes himself to be a sinner past the possibility of redemption, thereupon he also commits suicide, which in that case is clearly an act of insanity, for no one possessed of sane judgment would rush uncalled to certain condemnation.

"This state of diseased mind does not always derange the judgment in other respects; for instance, a harness-maker may be as competent a judge of leather, or of the value of a set of harness, as ever he was, although he may at the same time think himself an atrocious sinner, and be actually contemplating suicide. This is analogous to what is observable in the body; the injury or loss of a leg may impair or destroy the powers of progression, but does not impede the free use of the arms, or impair the skilful employment of the fingers. A person may write as well as ever, though he may not have a leg to stand upon."

After briefly enumerating the different grades of insanity, our author proceeds to consider its various causes: among these he mentions "predisposition." Of all hereditary taints transmitted to posterity through the succession of generations, there is none, perhaps, that adheres more tenaciously to the propagation of the species than mental alienation; for, though it may pass from one or even two generations without evincing itself, yet, phœnix-like, it revives from its ashes, and again asserts its particular inheritance with a demoniacal power, as if reinvigorated by the length of its slumbers.

"Nothing," observes our author, "shows

more strongly the great influence of predisposition than observing that in some individuals the rudest assaults of folly or fortune are totally incapable of deranging their minds; whilst in others the slightest reverses upset their reason. The same thing is observable with respect to bodily diseases. In some families, predisposition to gout or to consumption is so strong, that they are excited by causes scarcely noticeable, whilst other families may continue long exposed to a high degree of all exciting causes of those diseases without suffering from either. This is very remarkably the case with respect to diseases of the joints, which occur in some families in consequence of very slight injuries, whilst in other families very severe blows and falls are received upon those parts almost with impunity. The connexion of derangement of mind with predisposition is further confirmed by the fact that authors agree in assigning certain forms of mental derangement to obvious external physical characters. Dr. Haslam has stated, that out of 265 patients in Bethlehem Hospital, 205 were found to be of a swarthy complexion, with dark or black hair, the remaining sixty having a fair skin, and light brown or red air. Predisposition may exist in every possible degree, but predisposition is not the disease; to induce that other circumstances concur. Predisposition is a soil adapted for the seed of that disease; the one germinates in the other; separated both are unproductive. The passions are the seeds; whatever inordinately either excites or depresses them becomes a cause of mental derangement."

Pinel further illustrates the evidence of violent passions as causes of insanity. "Among the lunatics confined at Bicetre," says this experienced and excellent writer, "during the year 3 of the republic, a great majority had arisen from vivid affections of the mind, such as ungovernable or disappointed ambition," &c. It was about this period, as the reader is aware, that the revolution raged with the greatest violence, when the passions unyoked themselves from the car of reason,

"And mercy flew the plain."

No wonder, then, it so frequently happened that, in the vehemences of the conflict to demolish the regal throne, that of reason itself was upset.

Illustrative of the influence of indulgence in ungoverned passions is the following case, quoted from Pinel's work on Insanity.

"An only son of a weak and indulgent mother was encouraged in the gratification of every caprice and passion of which an untutored and violent temper was susceptible. The impetuosity of his disposition increased with his years. The money with which he was lavishly supplied removed every obstacle to his wild desires; every instance of opposition or resistance roused him to acts of fury. He assaulted his adversary with the audacity of a savage, sought to reign by force, and was perpetually embroiled in disputes and quarrels. If a dog, a horse, or any other animal offended him, he instantly put it to death. If ever he went to a fête, or any other public meeting, he was sure to excite such tumults and quarrels as terminated in actual pugilistic rencontres, and he generally left the scene with a bloody nose. This wayward youth, however, when unmoved by passions, possessed a perfectly sound judgment. When he came of age he succeeded to the possession of an extensive domain. He proved himself fully competent to the management of his estate, as well as to the discharge of his relative duties, and he even distinguished himself by acts of beneficence and compassion. Wounds, lawsuits, and pecuniary compensations were generally the consequences of his unhappy propensity to quarrel; but an act of notoriety put an end to his career of violence. Enraged at a woman who had used offensive language to him, he precipitated her into a well. Prosecution was commenced against him, and, on the deposition of a great many witnesses who gave evidence to his furious deportment, he was condemned to perpetual confinement at Bicêtre."

Dr. Gaitskell makes three principal divisions in the nature of mental derangement:—1st, that in which the derangement takes place co-existent with a state of excitement; 2ndly, as co-existent with a state of exhaustion; the 3rd and last state belongs to neither, but lies between the two. Of the first state the author gives the following example:—

"A lady was liable to paroxyms of insanity, with lucid intervals. Her delusion consisted in a strong belief that her relatives wanted to possess themselves of her property, which she was determined to prevent, and set about accomplishing her object in a very effective manner. On one occasion she brought the title-deeds of her freehold dwelling to the author, and exacted from him a promise not to give them up to her relatives. She then returned home, and immediately commenced breaking to pieces every article of furniture, chairs, tables, looking-glasses, earthenware, &c., &c., without sparing anything whatever. She was then placed in an asylum. After her recovery, the first thing she did was to call on the author, to reclaim her title-deeds, showing the correctness of her memory as to what had occurred up to the last moment of reason."

The tendency of mental derangement, it is well known, is to shorten life.

"But besides the danger to life," observes our author, "other questions of great importance arise. Is the disease curable or incurable? If curable, how long time may be required for that purpose? And will the cure be permanent or liable to relapses? To all these questions only a very doubtful answer in most cases can be given, dependent on a variety of circumstances, which scarcely

admit of being reduced to rule. Experience has, however, taught us to expect in some sort of cases, and under certain circumstances, favourable results, and the reverse in others. It is always more favourable for a cure when the cause of derangement can be removed, and unfavourable when it cannot. Rapid corpulency is a very promising indication of permanent recovery; whilst emaciation, with a voracious appetite, is an unfavourable symptom. Authors are generally agreed that the state of high and furious excitement is much more easily cured than the low and melancholic. Mental derangement supervening to some bodily diseases accelerates the fatal event; whilst by others, such as phthisists, it seems very sensibly to be retarded. The prospect of a permanent cure is always much less when connected with hereditary predisposition, or with the excessive and habitual use of spirituous liquors. Some kind of mental delusions are much more obstinately fixed than others, and are with greater difficulty removed. None are more firmly rooted than those which are connected with religious fanaticism, disappointed love, or other violated affection. The sudden acquisition of wealth is often as incurable as any."

The author is indebted to his friend Dr. Wilkinson for the following instance.

"During the period of the late speculations, a young gentleman having 10,000*l.* unemployed, placed it in the hands of his broker. The sum was invested in a stock, which had subsequently an enormous rise; the broker prudently sold it, and the 10,000*l.* became 60,000*l.* When the young gentleman was informed of the result, an idiotic state of mind was immediately produced, from which he has never recovered; his constant occupation is playing with his fingers, and continually repeating the words, sixty thousand pounds."

"Terror, when extreme, frequently produces some form of incurable mental derangement, of which the following is a lamentable instance. An accomplished young lady, being on a visit at a house where there was a human skeleton, her giddy young friends determined to play her a trick, by placing it in her bed at night. In the morning they found her playing with its fingers, a confirmed idiot, from which state she never recovered."

But it is time to conclude this review. Our analysis and extracts have been sufficiently copious to give a fair specimen of the intelligent manner in which Dr. Gaitskell has treated his subject; yet, before parting with the author, we are again anxious to express the interest we have taken in the perusal of his work, and to thank him for the gratification it has afforded us.

PROCEEDINGS OF THE ROYAL SOCIETY AT EDINBURGH.

Extracts from a Paper read on the Principle of Vital Attraction and Repulsion, with some applications in Physiology and Pathology.

BY DR. ALISON.

The object of this paper was to state and estimate the scientific value of a variety of facts which have been recorded by various physiologists, and many of which have been verified by personal observations, in proof of the proposition, that the fluids of living bodies, or in immediate contact with them, are, in many instances, liable to movements dependent on the vitality of those bodies, but independent of any vital contractions of their solids, and which can hardly be conceived to be effected otherwise than by certain *attractions* and *repulsions* peculiar to the living state.

Five classes of observations, perfectly distinct from one another, were stated in proof of this general proposition.

I.—The first are those made on the regular progressive movements of juices (made visible by whitish globules in many kinds of vegetables) to which the name of *rotation* has been given in the case of the cellular plants, such as the chara and caulinia, and that of *cyclose* in the case of cellular plants with emitting juices, such as the different species of ferns, movements which go on nearly uniformly, under considerable variations of temperature, and of other external circumstances, while life continues, and which are not only unattended with any visible contractions of the parietes of the cells or vessels containing the fluid, but are of such a nature as no contractions of these parietes appear capable of producing, as appears particularly from the elaborate inquiries of Schultze, Amici, Nisbet, and Cassini. This conclusion is the more important, as it is probably applicable to nearly all the movements peculiar to life in the fluids of vegetables, although the observations on which it rests can be satisfactorily made on those only which contain opaque globules.

II.—The second set of facts are those connected with the *visible currents* which take place in water, in contact with many living bodies, as ascertained, first, by the observations of Dutrochet, and of Dr. Grant on living sponges; secondly, by those of Dr. Sharpy, M. Quillot, and M. Raspail, on many aquatic animals, chiefly mollusca and the larvæ of reptiles; and, lastly, by those of M. Raspail and many others, on certain animalcules, chiefly of the genus *vorticella*. In all these instances, facts seem to be established which are altogether inconsistent with the supposition of the movements depending merely on contractions or vibrations of any living solid textures.

III.—The third class of facts adduced on this subject consists of those which show that,

in the fœtal state of animals, different parts are successively developed from the semi-fluid matter of the ovum; and the pustules of that matter must therefore have been much and variously moved before the heart acts, or any contractile vessels have been formed; and farther, that the human ovum itself, during the time when it is surrounded on all sides by the shaggy chorion, must draw its nourishment from the semi-fluid matter contained in the uterus, through the filaments of the chorion, without the aid of any contracting vessels in these filaments. These points appear established by the observations of Prevost and Dumas, Breschet, Velpeau, Raspail, and others.

IV.—The author considers the existence of attractions and repulsions peculiar to the living state, among certain of the particles of the blood of animals, to be established by due consideration of the following facts:—

1st. By the phenomena of the coagulation of healthy blood, and the absence of any contemporaneous mechanical or chemical change adequate to explain the change of aggregation of the particles of the fibrin on which that process depends.

2ndly. By the great retardation of that process, when blood (although its circulation is arrested) is confined within a healthy living texture.

3rdly. By the great acceleration of that process, when the living texture, in which the blood is contained, is severely injured.

4thly. By the total suspension of that process, when death is produced by a sudden and violent cause, especially by a cause which at the same time destroys the power of contraction after death in muscular fibres.

5thly. By the different modifications of that process, which are observed in inflammation.

6thly. By the phenomena which are observed in those portions of blood which are extravasated in inflamed parts.

In proof of these points, the author refers partly to personal observation, and partly to the works of Hunter, Hewson, Thackrah, Scudamore, Bates, Schrœder, Van der Kolk, Velpeau, Gendrin, Rayer, Collard, and Kaltenbrunner.

V.—The last set of observations, adduced in support of the general principle, are those which, in reference to more complex questions in physiology, are the most important, viz. those which indicate that the blood circulating in the capillary vessels of living animals, and examined by the microscope, exhibits a variety of movements, and changes of movement, which no visible or conceivable vital contractions of the heart and arteries are adequate to explain.

Most of these facts as to the capillary circulation were accurately observed, and the conclusion, which appears inevitable from them, as to the existence in the living state of a peculiar cause of movement, inherent in the blood itself, or, at least, independent of any impulse from contracting solids, was stated and carefully limited by Haller. In regard to the rest, the author refers not only to personal observations, but chiefly to the authority of Dollinger, Medemeyer, and Kaltenbrunner, in Germany, and of Quillot and Lenret in France.

The analogies which may be traced between the principle which seems thus established and other ascertained laws, both of living and inorganic matter, and the applications which may be made of it to the explanation of the more complex phenomena of the living body in health and disease, were reserved for a future communication.

Account of the Dissection of a Young Rorqual, or short Whalebone Whale (the Balæna Rostrata of Fabricius); with a few Observations on the Anatomy of the Fœtal Mysticetus. By Dr. Knox.

In February, 1834, a young whalebone whale was taken near the Queen's Ferry, in the Frith of Forth. After being exhibited for a short time by the proprietors, it was dissected by the author as carefully as time and circumstances would permit. The term *Rorqual* is employed throughout this memoir in the sense employed by M. Cuvier, as designating "whalebone whales, with longitudinal folds under the throat and chest." He thinks the present specimen quite distinct, specifically, from the "Great Rorqual" (the Balæna boops, jubarte, musculus, &c.), and not as M. Cuvier seems to think it, a mere variety. Among other distinctions, the Great Rorqual has 13 dorsal, and 43 lumbar, sacral, and caudal vertebræ; while the individual under consideration has only 11 of the former and 36 of the latter. There are, therefore, at least two species of Rorquals inhabiting the North Seas, namely, the Great Rorqual, and the one under consideration, a specimen of which was described by Fabricius (Balæna rostrata); another dissected by Hunter; and a third casually observed by James Watson, Esq., who sent a drawing of the same to Dr. Traill, by whom it was communicated to Mr. Scoresby.

The author had not leisure to examine the osteology with sufficient care; the following results have been in the meantime attained.

Internal and external character.—Eight distinct bristles, arranged in perpendicular rows, were found in the extremity of the snout, in both jaws. The lower part of the mouth is a huge pouch, which in the Great Rorqual must at times contain a vast volume of water. The tongue was free towards the apex, and the inside of the mouth of a pale rose or vermilion colour. The whalebone was about two inches and a half in length, varied from a pale rose colour to a dull white, and 614 large external plates were counted. No vestiges of teeth were found in either jaw; but it is not improbable that they exist in the fœtus of this species as well as in that of the Mysticetus, in

the lower jaw of which, lying imbedded below the gum, a series of teeth were discovered by M. Geoffroy St. Hilaire, several years ago, and in which the author of this paper has since observed them in the *upper jaw*.

Brain and Nervous System.—The cranium, besides containing the brain and its membranes, encloses a very large mass of a vascular substance, closely resembling an "erectile tissue." This forms an exception to the hitherto uniformly observed law of coincidence, at least in the mammalia, between the configuration of the inner table of the skull, and the contained brain. The erectile tissue filled a large portion of the interior of the cranium, also three-fourths of the spinal canal, where it surrounded the spinal marrow and nerves, being in some places nearly two inches thick. The whole cerebral mass, comprising two inches of the spinal cord, weighed three pounds and a half; while the cerebellum, pons, and two inches of the cord weighed only three-fourths of a pound.

Respiratory Organs.—The mode of breathing, and the structure of the nostrils, were precisely as in the great rorqual. The bolster-like substances filled the nostrils, which are withdrawn from them, at the moment of breathing, by muscles provided for that purpose. There are turbinated bones in the nose, and olfactory nerves, as large at least as the human. The author thinks it impossible for water to be habitually spouted through the nostrils. The whalebone whales have complex nostrils, and smell and breathe precisely the same as the higher orders of mammalia.

The *stomach*, composed of four compartments, contained no food. The middle tunic of the *ureter* was composed of distinct longitudinal-muscular fasciculi.

The author then proceeded to consider, at some length, a question, which has lately arisen, relative to the structure and functions of the abdominal glands of the Cetacea, and which has been six or seven times before the French Institute in the course of the late and present session, viz. Whether these glands are mammiferous? M. St. Hilaire conceives that they are not mammæ, and do not secrete milk, but that they are probably similar to those of the *ornithorhynchus paradoxus*, which he thinks are sexual, specific, and odoriferous, but not mammiferous.

The author first observed, that the question ought, in strictness, to be limited to the whalebone whales among the cetacea, because the great group of the *delphinus* was proved to be mammiferous long ago by Mr. Watson, an extract of whose observations is given in "Scoresby's Greenland." He next stated, that his own observation left, in his opinion, no doubt whatsoever, that the similarly situated glands, in the *balæna rostrata*, are also true mammæ. An elaborate anatomical examination showed that they resembled the lactiferous glands of the mammalia in their structure. A cursory examination of the fœtal *Mysticetus* led to the same conclusion in regard to that genus; and the author was farther informed by a former pupil, Mr. Auld, that, in the young *mysticetus* harpooned, he had seen a fluid, of a cream colour an! consistence, and oleaginous taste and smell, issue abundantly from the mouth, and in the full grown females he had forced out several pounds of a similar fluid from the orifices of the glands by pressure of the foot on the abdomen.

The specimen of Balæna rostrata, examined by the author, was 9 feet 11 inches in length, 3 feet from snout to ear, and 4 feet 8 inches in girth at the termination of the plica and folds.—*Edin. New Phil. Journal.*

A REPORT OF THE DIFFERENT DISEASES AT PRESENT IN THE RACOON HOSPITAL SHIP, OF THE DEATHS THAT HAVE TAKEN PLACE FOR THE LAST FOUR YEARS, WITH TABLES OF DIET, &c. THAT CONVICTS ARE ALLOWED.

On our visit to Portsmouth, the object of which our readers will find in the leading article of this number, we endeavoured to investigate, as minutely as possible, the diseases most common amongst the convicts in the hulks; we thought it also our duty to examine into the living, labour, &c. of those confined individuals. Most of the diseases that are at present in the Racoon Hospital Ship are of a chronic nature; we observed a few cases of simple continued fever, a very singular case of ulcers, originating in abscesses, and forming in different parts of the body, which, in all probability, arose from a scrofulous diathesis, provoked and increased from one constant diet, and from being in a particular atmosphere, not adapted for such a delicately disposed constitution; there was also a well-marked case of fungus hæmatodes, in a chronic state, which, from the least irritation, discharged a sanious fluid. This man was about 40 years of age, and had been confined for some time in the hulks, apparently he had been of healthy constitution, and of a sanguineous temperament, and which, together with the confinement and for the punishment for which he had been convicted, had caused so much anxiety, which had debilitated his corporeal frame, and thus rendered him prone to one of the most appalling diseases to which human nature could be liable. At present, however, he appeared calm and composed, as if he had reconciled himself to the doom he had to suffer. There was, too, a case of well-marked case of scrotal hernia, which had been produced since his confinement in the hulks. It occurred in a young man, of strong robust appearance, of whom every care was apparently taken. Most of the other cases were of a pulmonary nature, which Mr. Elliott, the

Assistant-Surgeon, informed us were the most common diseases that broke out in the Institution. Another well-marked case of disease of the skin; it was a mixture of psoriasis and eczema, covering in thick patches the whole of his body, and occurring, as these diseases frequently do, in a person of good constitution and in robust health. The deaths that had taken place within the last three months were only two, with the exception of Mr. Edwards, the Assistant-Surgeon. The first was that of Henry Count, a man aged 40, who for the last few years had been in an unsound state of mind. It was stated upon his *ticket*, that on the 29th of October he was attacked with vomiting and purging, had pains about his abdomen, slight cough, &c. Mr. Williams, the Surgeon, prescribed astringents for him, all however were of no avail, and on the 22nd of December he died. It is proper, however, to state, that his alvine dejections were of a light watery colour, and at first tinged with blood.

The other case of death occurred in Henry Long, also a maniac. He had for some time been troubled with œdema of the legs, and some fluid was perceptible in the abdomen. He was attacked also with vomiting and purging, and on the 14th of October he died. The clinical accounts taken were not very minute, and, indeed, not sufficient for any one to judge exactly as to the nature of the disease. The character of the disease to which Mr. Edwards fell a victim we are unable to state to our readers, as the only information we could obtain was, that he died of inflammation of the chest; whether it was of the heart, lungs, pericardium, pleuræ, &c., at present remains in some doubt. Inflammation of the chest, however, we knew not to be cholera, therefore so far we were satisfied.

The hospital in which these men are kept presents comforts nearly equal to our London hospitals. It contains about fifty beds, each bed is separated about a foot and a half from each other, and the servants of the institution are those convicts who are considered the best adapted for each particular office.

The wards are as clean as they can be kept, and we were informed that every month the walls of the wards are newly white-washed. They were performing this ceremony at the time we made our visit, and, of course, without inquiry, this would have excited our suspicion, and, further, we observed that they were remodelling their water-closets, as unfortunately at this period some of the drains had become clogged up. Mr. Strickland, however, the governor of the Racoon Hospital Ship, stated in a very satisfactory manner, that they had not existed so many days, therefore we left with a full conviction that they had not been the cause of any disease. As to the pulmonary affections to which so many of these men are liable, we are not altogether surprised at it, for they are necessitated to be almost constantly washing their floors, in order to keep them in a state of cleanliness, and this, consequently, would cause sufficient dampness to infect those susceptible to coughs, colds, &c., which are, in all instances, the forerunners of phthisis pulmonalis.

We have now only a few remarks to make on the diet. We have given a table of the difference of diet for the sick and healthy, in which our readers will observe, amongst a quantity of other kind of food, fourteen ounces of beef is allowed every other day to each healthy convict. This, on looking to the other dietetical potions, legumes, &c., is certainly sufficient to preserve the health of any individual. But we question whether it be the best policy, or even the most likely to preserve the health, in confining them weekly, we may say yearly, to one particular meat, viz. beef. It would not be a greater expense to government, neither would it be half so likely for us to find so many convicts in the Racoon Hospital Ship, if the meat was alternately changed, nor would it be a less severe punishment for them. We believe, on the contrary, that it would be the means of preserving their strength, and render them less liable to predisposition for disease.

In the hospital ship diet, we are somewhat surprised to see tea, sugar, &c., allowed; this is indeed a greater indulgence than even any of our hospitals allow. It is well known by most medical men, that in almost every disease, particularly of a disease of the nervous system, tea does more harm than good. It does not possess the least beneficial quality; on the contrary, we believe stomachs in the most healthy condition are frequently rendered what is termed "dyspeptic" by its use. Now we cast our eyes on some poor miserable looking wretches, who, together with anxiety and a broken-down constitution, would in their condition be considerably alleviated, if two or three ounces of wine were allowed to them daily: there are but few who would require this; the expense would not be increased, if it was substituted for the tea, which is certainly quite useless. We do not advocate indulgence for men, the outcasts of society; but we consider, as they are human beings, and as they are as liable, if not more so, to the afflictions of disease as any other of our race, that they should, under such circumstances, be as far as possible alleviated from a suffering to which every one of us is liable, especially when we see it might be done without adding any additional expense. We have not the least doubt but the surgeon to this institution, a man of reflection and ability, will see, as well as ourselves, the necessity of it, and we hope, ere long, to hear that something of the kind will be allowed to them. We will leave this subject for the present, and content ourselves by showing our readers a table of the diet that convicts are allowed, and also append a table of mortality that has occurred within the last four years out of 1000 convicts, which we are told is the usual number in the hulks.

Racoon Hospital Ship, 28*th Dec.* 1834.

TABLE I.

FULL DIET. Daily Allowance.							HALF DIET. Daily Allowance.								LOW DIET. Daily Allowance.				
Bread.	Milk.	Mutton.	Oatmeal.	Salt.	Vegetables.	Porter.	Bread.	Milk.	Mutton.	Rice.	Sugar.	Salt.	Vegetables.	Tea.	Bread.	Milk.	Rice.	Sugar.	Tea.
lb. 1	pt. ¾	oz. 12	oz. 4	oz. ½	lb. ½	pt. ½	lb. ¾	pt. ½	oz. 8	oz. 2	oz. ½	oz. ½	oz. 8	oz. ½	lb. ½	pt. 1	oz. 2	oz. 1	oz. ¼

Soap allowed to each per week, 2½ oz., part of which is given to the Washerman for linen.

TABLE II.

HEALTHY DIET.										
Tuesdays, Thursdays, and Saturdays.					Mondays, Wednesdays, and Fridays.					
Bread.	Biscuit.	Meal.	Beef.	Salt.	Bread.	Biscuit.	Cheese.	Beer.	Salt.	Oatmeal.
lb. 1	oz. 4	oz. 7	oz. 14	oz. 1	lb. 1	oz. 4	oz. 4	pt. 1	oz. 1	oz. 7

Soap allowed to each, 1¼ oz. per week.

TABLE III.

An Account of Prisoners died in the Years—

	1831	1832	1833	1834
York .	18	23	12	12
Leviathan	21	30	12	11
Total	39	53	24	23

THE

London Medical and Surgical Journal.

Saturday, January 3, 1835.

COLLEGE OF PHYSICIANS.

A RUMOUR is afloat that Sir Henry Halford has introduced a motion into the College of Physicians for the correction of some of its abuses, but which was rejected. We heard the report, but could scarcely give credence to it. We thought it impossible that a man at the head of an oligarchial corporation, and sustained in a great measure by men imbued with all the conservative feelings afloat, should have ventured on such an expedient. Such, however, appears to be the fact. Sir H. Halford has become a Reformer! has been the mover of a measure that he believed, it is said, would be beneficial to the College, would relieve the oppressed portion of its members from the restraints under which they labour, and give some satisfaction to the Licentiates. The details of the measure cannot be told, because they cannot be had, except from a Fellow, who is bound by the laws of the College not to unfold its secrets. Spontaneous reform will undoubtedly take place; it is doing so in every institution in this kingdom. Whether it arises from the wishes of its own members, or it results from the pressure without, is a matter of no importance; if it does occur, we care not for its source. But spontaneous reform will be slow in its progress, and it can be accelerated only by the mighty voice of the press, or by the impulsion of a legislative enactment. We announced in our last number the loss of Mr. Guthrie's motion in the College of Surgeons. We have reported the improvement which has taken place in the mode of conduct-

ing the examination at the College of Surgeons, and we know that, in addition to bones, arteries, &c., being placed before the candidates, the recent subject is put before them. Last week a dissected arm was laid on the table.

The examination at the College of Surgeons is now becoming what the one at Apothecaries' Hall is—a respectable one—a fair test of a pupil's acquirements. But the College of Physicians appears rotten at the core; its very foundations are based on feelings of monopoly; its regulations are adapted only for the rude times of the Goths or the Vandals. Well might some of the Fellows who opposed Sir H. Halford's motion (for though he is the *head* he may not be the *heart*) pretend to act so, on the ground that Parliament would afford the remedies. They knew themselves incapable of rectifying the abuses, on account of the conflicting feeling among their own members, and wisely, perhaps, left Reform to Fate. What beneficial motion could Sir Henry Halford introduce? Would it be a motion to admit dissenters, unrestrictedly, into the College?—Would it be a motion to admit every properly-educated man from all and every university at once into the Fellowship?—Would it be a motion, giving the power to admit twenty of the Licentiates annually into the Fellowship, and to increase the period of examining, and rendering the examinations more difficult, with a thousand other abuses? We opine not. We cannot expect figs from thorns, nor grapes from thistles. The plan was undoubtedly a *ruse de guerre*, to show to Parliament and the Profession the disposition of the College to prune itself of noxious abuses, and to show that they required no foreign aid.

CHOLERA AT PORTSMOUTH.

The "Liberty of the Press" has afforded many a theme for declamatory orators to expatiate upon. One has believed that if the liberty of the press was in the slightest degree restricted, was shackled by the base dictum of tyranny, the progress of reform would be, of necessity, arrested; another individual has attempted to sustain the opposite opinion.

We hold a medium opinion on this subject. If the press is allowed to be a vehicle for the promulgation of dangerous sentiments, or for private malice and personal abuse to engender in, then the press becomes a curse, instead of what it is, the great power of the people.

In No. 151 we announced that Cholera had arisen among the convicts at Portsmouth; we received the information from a medical man, an intimate friend of the surgeon to the hulks; we believed the report to be true, most true, and accordingly gave it publication: we need not repeat the statement. In a few days it had gone the round of the daily papers, but it was as quickly and fully contradicted by the surgeon, through the medium of the papers also. The contradiction appeared in the form of a letter, most unequivocally denying the truth of the statement, and teeming with invective and all manner of uncharitableness against the author; those kind of expressions, which men occasionally indulge in when in a passion. During all this time, we received no communication, nor have we up to the present moment; we have heard much about "legal proceedings, &c.," all of which we listened to with profound attention. It is true we saw a letter sent to a gentleman connected with the journal, but not to the editors. It was a letter from the

surgeon requesting the name of the author, the chief point, however, being to ascertain whether or not the report originated from "malicious or evil intention." At this juncture the name of the author was obtained, but then came the editorial comments.

Not satisfied, despite the testimony of the surgeon, we visited Portsmouth ourselves to have proofs the most positive, if obtainable, that cholera did not exist among the convicts, had not recently existed, and also that they were neither "filthy" nor "ill fed;" circumstances which we most potently believed when the paragraph was dictated. We are now convinced that the cholera did not exist at Portsmouth at the time we specified, and equally satisfied that the convicts are not filthy or ill fed.

These are spontaneous confessions — such confessions as every honest man, we imagine, is bound to make. If we have inflicted an injury, we have used every endeavour, and spared no trouble or expense, to repair the injury, consistently with our duty as editors, and our characters as members of an enlightened profession.

However cleanly convicts may be preserved, and however well fed they may be, if cholera had appeared among 500 men in one vessel, is it not probable, is it not a fair inference, on the presumption held by government that cholera is a contagious disease, that the mortality would be great?

Cholera is undoubtedly very closely connected with filthiness; though it attacks rich and poor, yet its usual habitation is in dirty streets, and among people ill fed, who live irregularly, or who are in a debilitated state. When the cholera appeared in the hulks at Chatham, at Plymouth, and at Portsmouth, during the summer of 1832, was not the mortality greater than in the majority of other bodies of individuals?

Report of Societies.

LONDON MEDICAL SOCIETY.

Monday, December 22nd, 1834.

W. Kingdon, Esq., in the Chair.

Fracture of the Coracoid Process of the Scapula.

The principal speakers were Dr. James Johnson, Dr. Shearman, Dr. Negri, and Dr. Whiting, Mr. Bryant, Mr. Kingdon, Mr. Underwood, Mr. Dendy, Mr. Clifton, and Mr. Browne.

Dr. Whiting stated, in reply to a question of Mr. Dendy, that he had been unable to obtain permission to examine the body of the patient whose case he had narrated at the previous meeting.

Mr. Bryant related a case of injury to the shoulder-joint, which occurred in his practice within the past week. The patient was a man of robust frame and intemperate habits; the accident happened while intoxicated. He fell forwards on his face, striking his left shoulder against the ground. At first Mr. B. was of opinion that the neck of the humerus was fractured, but, when the tumefaction had somewhat subsided, he recognised a fracture of the coracoid process of the scapula. It might be owing to this process striking against some elevation or inequality in the ground, but Mr. Bryant was inclined to attribute it to muscular action. The treatment adopted was drawing the shoulder forwards, and binding the arm to the chest.

This case was narrated by Mr. Bryant with the view of drawing attention to it, as he was not aware of there being any such case on record. This did not appear to be the opinion of other members of the Society. Several gentlemen, who had been formerly Mr. Abernethy's pupils, stated that he was in the habit constantly of drawing their attention to the possibility of the occurrence of this accident, and it was an axiom with him, that in all cases of injury to the shoulder-joint, where nothing else could be discovered, the coracoid process should be examined by placing the fingers between the pectoral and deltoid muscles, and giving them a degree of motion.

Mr. Kingdon had never seen the accident occur from direct violence, but had witnessed one or two cases of the kind accompanying dislocation forwards of the humerus. Mr. Kingdon would carry Mr. Abernethy's recommendation further, and in cases of dislocation forwards, or even into the axilla, he would make the examination of the coracoid process, as its integrity would influence greatly the

success of the treatment. Should it be broken off, there would be nothing to prevent the head of the humerus from falling forwards, and, therefore, measures to keep it reduced must be adopted. He had known a surgeon cast in damages and his reputation blasted, because a dislocated humerus could not be kept reduced.

A pause having ensued, Mr. Dendy proceeded to narrate a case which he considered to be vicarious action of the bladder and liver. A little boy was brought to him to be sounded, in order to ascertain whether he had a stone in the bladder, as he had been suffering from symptoms of that disease for some time, more especially pain in the region of the bladder, occasional hæmaturia, with a discharge of thick mucus in the urine. There was also considerable constitutional irritation, with constipated bowels, stools clay-coloured, skin yellow, with other indications of disordered liver. Mr. Dendy was unwilling to sound the boy at that time, as he considered him to be in too great danger to bear the irritation, nor did he direct his remedial measures to the relief of the hepatic affection, being desirous rather of removing the complaint of the bladder, which he believed to be primary. Demulcents were prescribed, and the little fellow had two grains of the submuriate of mercury. At this time rather a curious circumstance happened, the jaundice increased, and the hæmaturia diminished, and Mr. Dendy now learnt that during the continuance of the case such had always been noticed, namely, that, as the hepatic complaint became more severe, the other was alleviated, the converse holding good. He then, changing his original opinion, and considering the liver to be the organ really in fault, gave the proto-chloride of mercury, with taraxacum and gentian, and with good effect. The general health improved, and likewise the affections of the liver and bladder.

A case of pneumonia was then detailed by a gentleman with whose name we are unacquainted; antiphlogistics were freely tried, but the complaint persisted; hæmaturia to a considerable extent set in, and the pulmonary symptoms were relieved; the vesical hæmorrhage ceased, and the affection of the chest returned.

The discussion afterwards turned on the physiological explanation of the case of hepatic and vesical affection, which Dr. Whiting considered might be referable to the fact that the blood of the abdominal viscera passes through the liver, and if much disease occurred in that viscus, the vessels of the other parts would become overloaded, and thus hæmorrhage might ensue; in the present case those of the bladder yielded.

Dr. James Johnson was of opinion that the bladder was the organ primarily affected, and urged the propriety of examining it to ascertain whether it contained a calculus. This Mr. Dendy promised to do, and communicate the result at the next meeting.

The society then adjourned to Jan. 12, 1835.

The reasoning by which Dr. Whiting endeavoured to account for the semeiology in Mr. Dendy's case is plausible, but it has one great fault—it is not correct, nor is it even in accordance with facts. Let us examine it. The case was one of hepatic affection alternating with vesical disorder, as the one diminished the other increased in a like ratio. Were Dr. Whiting's theory right, instead of the hæmaturia being lessened or ceasing as the jaundice became more intense, it would, as a natural consequence, be much more severe. Besides, do we not know that a more direct channel for the blood of the system of the vena porta, when it is obstructed in the liver, is through the hæmorrhoidal veins, as many a student or sedentary being can testify? If, then, in middle or advanced age these veins are more liable to give way than those of the vesica, *à plus forte raison* will it be the case in infancy, when the bowels are especially irritable and relaxed.

Foreign Medicine.

ACADEMIE DE MEDECINE.

New Experiments on the hydrated Tritoxide of Iron as an Antidote for Arsenious Acid.

BY MM. MIGUEL AND LOUBEIRAN.

In this memoir M. Loubeiran first recalled the attention of the Academy to the experiments of MM. Bunsen and Lesueur, and pointed out some of their inaccuracies. He then entered fully into those attempted by himself and M. Miguel, which were exceedingly various.

1st. On the 23rd of October, 1834, he administered to a middle-sized dog twenty-four grains of white arsenic in a certain quantity of water. Violent vomiting supervened; the hydrated tritoxide of iron was administered; the vomiting continued. The remainder of the day the animal was very dull, the next morning he became lively, and two days afterwards he perfectly recovered.

In another dog, ten grains of arsenious acid occasioned similar vomiting; ten minutes afterwards the oxide of iron was administered without arresting the vomiting; however, in the course of the afternoon of the same day the dog perfectly recovered.

The whole that we can judge from these experiments is, that the violent vomiting had evacuated the whole of the poison from the stomach, so that the hydrated tritoxide of iron may have been useless. This is what has already been stated, therefore the following experiments are a demonstration of the facts.

2nd. Consequently, to three middle-sized dogs a strong dose was administered, and to one of them as much as eighteen grains of the arsenious acid. Violent vomiting and copious evacuations supervened more or less promptly. By the afternoon the dogs were re-established in health, with the exception of slight purging, which remained.

The natural consequence was, that no experiments would prove the value of the poison, unless the œsophagus was tied. A new series of experiments were now tried, and they were assisted by M. Notat.

3rd. To assure themselves, in the first place, of the effect of the operation itself, the œsophagus was tied after they had given the animal something to eat. In the course of 78 hours afterwards the dog died.

4th. They gave to two dogs the accustomed dose of arsenious acid, and tied the œsophagus of each: one died in the course of two hours, the other in two hours and a half after the poison had been swallowed.

By these two experiments they had thus the two terms of comparison—one from the effect of the operation, the other from the effect of the retained poison.

5th. They administered to a dog twelve grains of arsenious acid; they then gave a sufficient quantity of the tritoxide of iron; and, lastly, tied the œsophagus. The first effects of the poison manifested itself, but in a short time disappeared. In 24 hours after the ligature was removed; the animal lived till the sixth day.

On two poodle dogs eighteen grains of arsenious acid were administered, the tritoxide given at the same time, and the œsophagus tied. The symptoms of the poison disappeared; one of the dogs lived 72, the other 82 hours after the operation.

These two experiments then left not the least doubt, as two dogs had lived only the same period that had simply their œsophagus tied.

The energetic effects of the hydrated tritoxide of iron were thus shown when administered immediately. It now remained to show the value of this as an antidote when given some time after the poison had been taken.

6th. To a small dog eight grains of the arsenious acid were administered, and in about two hours and a half afterwards the tritoxide was given; half an hour afterwards the animal died.

They then administered some arsenious acid to a large dog, the œsophagus was tied, and in an hour afterwards the antidote was administered; the dog lived ninety hours.

The same experiment was made on a spaniel with eight grains of arsenic; the dog lived twenty-four hours. Another dog took twelve grains, and died only eighteen hours afterwards.

We observe, then, that according to the size and power of the dog the difference of the effects which prevented them from establishing certain and fixed principles; but in the greater part of the dogs the administration of the tritoxide of iron an hour afterwards greatly diminished the symptoms, and evidently prolonged life; in one of them the poison appeared completely neutralised, as he lived even longer than the one that died from simply the operation in tying the œsophagus.

One important fact is established, which is, that this antidote does not act in all cases with equal energy, under all circumstances. For example, when the arsenic was mixed with greasy substances, the tritoxide of iron greatly diminished the symptoms of the poison, but did not check them completely.

7th. They administered to a large dog forty-two grains of arsenic, mixed with grease; in spite of the administration of the tritoxide, the dog died in twenty-four hours. A poodle took only eighteen grains, and lived for the short space of twenty hours. It appeared to them that the antidote acted only on the external layer of arsenic mixed thus with grease, and when the arsenite of iron was formed by their combination, the oxide in substance passed into the intestines, and the arsenious acid remaining in the stomach acted without meeting with any obstacle.

MM. Miguel and Loubeiran found also by experiments, that when the hydrated tritoxide of iron was mixed in arsenious acid with a large quantity of water, the decomposition was very rapid, whilst, on the contrary, if the substances were in a pappy state together, the arsenite of iron was slowly formed. Finally, it was important to precise what quantity of the tritoxide of iron was necessary to neutralise a certain quantity of arsenious acid. In every experiment on the dogs, twelve parts of the tritoxide were sufficient for one part of the acid. In making these quantities react upon one another in a large quantity of water, the decomposition was, in fact, complete.

In terminating the memoir, M. Loubeiran simplified the method for obtaining the hydrated tritoxide of iron, and stated from the result of his experiments he was convinced it was an excellent antidote for arsenic.

From the result of the foregoing experiments, together with the experiments that we gave some time since of M. Orfila, both of which, as regards effect, precisely coincided with each other, we cannot help recommending a trial of this antidote, though we are aware that one of our contemporaries has stated that he believes it is not of any use—it is at all times dangerous to draw too hasty conclusions.

British Hospital Reports.

ST. THOMAS'S HOSPITAL.

A few numbers since we promised to give to our readers a full account of a Taliacotian operation, performed by Mr. Tyrrell; we are happy to be enabled to lay before them a full detail as related by the Professor himself.

A Case of Loss of Nose, and Restoration by the Taliacotian Operation, with Remarks.

BY FREDERICK TYRRELL, ESQ.,

Surgeon to St. Thomas's Hospital, &c.

In relating the following case, I shall omit

all minute detail, and confine myself to such points as I consider worthy of notice, and requisite to elucidate the observations I have subsequently to offer.

J. H. æt. 27, of small stature, light complexion, dark hair and eyes, and of scrofulous diathesis; by trade a working goldsmith; had suffered from cynanche tonsillaris two or three times, and also from common lepra twice. His habits had been irregular, but he had not been addicted to intemperance.

In 1831 he had gonorrhœa and chancres, for which he took mercury, but not so as to affect his mouth, and he apparently got well. A few weeks afterwards he was attacked with inflammation and ulceration of the soft palate, which destroyed part of the palate and uvula; this disease was arrested and relieved by mercurial fumigations and a gargle of the chloride of soda.

After this he remained tolerably well for about a year; but, in the spring of 1832, he felt uneasiness at the upper part of his nose, which became swollen and tender. This was soon followed by an offensive discharge from the nostrils, which was frequently tinged with blood; and some pieces of bone separated and passed by the pharynx, through the mouth. Under professional advice he took mercury in large and small doses, sarsaparilla, and mineral acids, and applied injections of the solution of the chloride of soda; but, in spite of the means employed, the disease progressed, and in October (six months after the disease commenced in the nose) he applied at St. Thomas's Hospital, and was admitted under my care. At the time of his admission, the extremity of the nose, the fibro-cartilaginous septum, the whole of the left ala, and part of the right, were gone, and the larger part of the turbinated bones had exfoliated; the ulceration was still proceeding, and the edges of the ulcer were ragged, the surface sloughy, and affording a copious thin secretion, mixed with blood, highly offensive and irritating; the surrounding skin was red and swollen, and the whole part excessively tender and painful. He was pallid and emaciated; his pulse was quick and feeble; his appetite bad; his bowels irregular, usually constipated; he enjoyed but little sleep, and frequently woke in profuse perspiration.

I prescribed for him, Hydrarg. c. cretâ, g. ij.; Opii, g. j. om. nocte. Decoct. Sarsap. c. c. Quinin. Sulphat. ter die, and a mild aperient when required. His diet was to be nutritious. As a local application I ordered the following lotion, to be used on lint, and covered by a light and warm linseed poultice: ℞. Aquæ distillatæ, lb j.; opii, ʒ j.; cola post solutionem; tum adde liquori colato mucilaginis acaciæ, ʒ j. ut. ft. lotio.

For a few days there was no visible improvement, and he obtained very little sleep; I therefore prescribed liquoris opii sedat. min. xxx. to be taken at night, instead of the grain of opium. An improvement then took place in his general health; he rested better, ate with some appetite, and requested to be allowed some port wine, of which I ordered two glasses a day for him. But, although his general health mended, the ulceration did not stop, and the diseased part continued tender, painful, and unhealthy in aspect. About the middle of November his health again retrograded, when I changed his medicines, giving him ferri subcarbon. ʒ ss. ter die, and solut. acetatis morph. m. x. nocte.

His general health again rallied, but the ulcer remained much in the same state; and, in the beginning of December, I tried, as a local application, an ointment of the hydriodate of potash; but it created so much irritation, that it was soon discontinued, and a lotion of black wash, opium, and mucilage substituted. During the whole of the period that he had been under my care every attention had been paid to the state of his secretions; and his food, always of nutritious quality, was changed repeatedly to suit his palate and excite appetite.

The local disease nevertheless extended; the right ala had been destroyed, the ossa nasi had been exposed, and had exfoliated; the vomer and remains of the turbinated bones had also separated. In consequence of some observations in the periodicals on the efficacy of iodine in secondary syphilis, I was induced to try it in this case; and, on the 31st of December, prescribed solut. potassæ hydriodatis (Lugol's) ter die, and the dose was gradually increased, during the month of January, to min. xvj. ter die. He continued the use of the acetate of morphia, of which the dose had been increased by degrees to min. xxx.; and he occasionally took besides a pill of conium and ipecacuanha to relieve a cough. The exhibition of the iodine was followed with immediate beneficial change; his appetite, in a few days, was excellent; he slept well, and was enabled to leave off his opiate; his cough subsided, and the local disease seemed as if affected by some charm, so rapid was the change in it. The tenderness and pain were no longer felt; the surrounding redness and swelling disappeared; the surface and edges of the sore became even, florid, and healthy, and gave out a good purulent secretion.

From this time he went on well in every respect; his general health improving, and the ulcer granulating and cicatrising; so that on the 10th of July he was made an out-patient; once only was he obliged to leave off the iodine for a few days, in consequence of his stomach being disordered, and he then took the sarsaparilla again, but resumed the use of the liq. potassæ hydriodat. as soon as the irritability of the stomach had subsided.

While attending as an out-patient, the sarsaparilla was substituted for the iodine for the same reason, but his general health declined, and the sore became unhealthy, and began to spread again. I therefore re-admitted him into the hospital on the 1st of August; and

considering the use of the iodine inadmissible, from the state of the stomach, I directed the sarsaparilla to be continued, with small doses of hydrarg. c. cretâ, and opium, with his former diet. He was attacked with diarrhœa, which had been, and was prevalent in the hospital, on the 23rd of September, which compelled me to omit the sarsaparilla, &c. for about three weeks. On the 15th of October he resumed the use of the sarsaparilla, and was so much recovered on the 19th, that I prescribed two tablespoonfuls of the following mixture, to be taken three times a day, instead of the sarsaparilla: ℞. Iodines, grss.; potass. hydriod. ʒss.; syrupi papaveris, ʒss.; aquæ distill. lbss. Rapid improvement again took place in his general health and in the ulcer; and, without any change worthy of notice, the ulcer had perfectly healed, and his general health was restored in the beginning of January, 1833.

Some months afterwards he called upon me to solicit me to try some means of relieving the horrid deformity created by the loss of the parts I have mentioned. I then resolved upon performing the Taliacotian operation for him, there being an ample forehead to furnish integument for the new nose; but, before I undertook the operation, I was desirous that the new formed structures should be well organised, and contracted as much as they would admit. Considering these objects to be effected in the spring of 1834, and his general health being good, I admitted him into St. Thomas's again.

Reflecting on the operation which I was about to undertake, I thought I might, by artificial means, give support and figure to the new nose, which I feared (from the loss of the ossa nasi, and the extensive ravages of the ulceration) would be otherwise to form and maintain.

The fact of styles or tubes of silver or gold being worn in the nasal duct for years without inconvenience or mischief, principally induced me to make the trial of a metallic support in the present case. I therefore took a cast, in plaster of Paris, of the patient's face, and had a light but firm frame of platina formed, the base of which was to rest on the frontal bone above, and the superior maxillary bone below; from this there projected a small stem, corresponding to the septum of the nose, continuous with, and supporting inferiorly, the main part, which passed in the direction of the median line, from that end of the base which was to rest on the frontal bone, and joined the portion I have mentioned, corresponding to the septum, at an acute angle: from near the junction of these two parts, but attached entirely to the dorsal portion, two small alæ projected laterally, which were to support the alæ of the new organ.

The support was made of platina, as not liable to be acted upon by the secretions or air; and in forming it I bore in mind the possibility of its producing irritation or mischief, which might render it necessary to remove it; it was not, therefore, so firm as it might have been made, had I been certain of its remaining without injury, for I had contrived it so that it could be easily removed at any time, without disturbance to any part.

Having fitted the platina frame to the plaster cast I had of the face, I carefully modelled over it some plastic wax, as near as I could judge, of the thickness of the integument of the patient's forehead, so as to form an artificial nose; this being afterwards spread out flat and laid upon the forehead, gave me accurately the portion of integument I should want to cover the platina frame, and form the new nose; but it was necessary further to make allowance for the twisting or turning of the flap, and the contraction which would occur after its union.

Being fully prepared, and the patient being in good health, I performed the operation on the 16th of May, 1834. The extent of integument which was to be raised from the forehead was distinctly marked out by a line in indigo; the stem by which the flap was to retain its connexion was at the inner extremity of the right eyebrow, and the flap itself had an oblique direction over the left eyebrow and left side of the forehead; it terminated in the tongue-like piece which was to form the septum of the nose.

The patient was placed in a recumbent posture, and I had first made an incision completely through the integument on the right side of the nasal opening, which extended from the nasal part of the frontal bone, downwards and outwards, to the site of the termination of the original ala; a second incision, parallel to this, but about one-tenth of an inch distant, and penetrating to the same depth, included a narrow strip of integument, which I dissected out, leaving a narrow deep groove. I then, in the same way, made a similar groove on the left side.

Next I removed a small square piece of the integument and soft structures on the median line, at the upper part of the commissure of the lip, so as to expose the periosteum over the junction of the superior maxillary bones, to a sufficient extent to receive the corresponding part of the base of the platina support and the extremity of the new frænum. I also made a similar space over the lower part of the frontal bone, on the median line, to lodge the upper part of the base of the platina frame.

Thus I had prepared for the reception of the artificial support, and the skin which was to form the new nose, and I proceeded to detach the flap from the forehead.

I traced the outline, made with indigo, with the scalpel, carrying the point of the instrument to the pericranium; and then I dissected up the flap, leaving little or nothing but pericranium. The connexion left towards the right eyebrow was about a quarter of an inch in width.

The hæmorrhage was checked by pressure with German tinder, and the flap was held between sponges dipped in warm water.

As soon as all bleeding of consequence had ceased, I put the platina frame in its place, and brought the flap of integument over it. To secure the flap, I used small curved needles and thin silk ligatures, and passed the first sutures through the extreme lateral parts of the flap, and the lower ends of each lateral groove; and, by tying the ligatures, I readily adapted and fixed the extremity of each ala in its proper situation. I then passed other sutures on each side, about a third of an inch apart, so as to secure the edge of the flap in the groove made for its reception; and, lastly, I fixed, in like manner, the strip of skin which formed the septum.

A small vessel near the tongue-like portion of the flap which formed the septum, continued to jet out blood, even a short time after the sutures had all been tied; showing that a large part of the flap was well organised. Every part fitted perfectly, and I had good reason to be satisfied with the immediate result.

The patient bore the operation without a murmur or complaint, and was conveyed to his ward and bed in high spirits, the wound on the forehead was covered with German tinder, and the nose had a thin layer of soft cotton placed on it; but the larger part of this covering was soon removed, for the influence of the air from the lungs kept the part perfectly warm.

Union took place very rapidly, and in four or five days every suture had been removed; the adaptation had been so perfect, that it required close inspection to distinguish the line of junction for a considerable extent. The stem of the flap, which had been twisted in turning down the flap, had become perfectly smooth. The part retained its sensibility, but, if touched, the sensation to the patient was as if the forehead were touched; and this occurred for many weeks after the operation.

For the first two or three weeks every thing went on most prosperously: the nose retained an excellent figure, and the platina frame appeared fixed, and did not produce the slightest inconvenience; but I soon observed changes going on, which I dreaded would disturb the harmony of the work. The integument forming the new nose began to contract, and I regretted to see this take place very unequally; that on the left side being much more rapid and extensive than on the right: this I had in a degree anticipated, and thought I had amply provided for it, by making the side of the flap, which formed the left nostril, more extensive altogether than the other. I had not, however, calculated upon the greater contraction of the thin integument, of which the left side of the nose was formed; for it came from the superior part of the forehead, where the skin was thinner, and the subcutaneous cellular tissue much less abundant.

The irregular contraction after a little time displaced the platina frame, and the part, which should have supported the point of the nose, by degrees projected out of the left nostril; still it did not irritate, or occasion any uneasiness.

After waiting some weeks, to ascertain whether I could remedy the defect without removing the platina frame, and, deeming it impossible, I reluctantly had it taken out; this was done by the patient himself, easily, and without suffering.

The contraction increased a deformity of the upper lip, which previously existed on the left side, by drawing up and everting that part of the lip. The previous defect had been occasioned by the exfoliation of a portion of the superior maxillary bone, and I am of opinion that the want of support and attachment resulting from this had favoured the contraction of the left ala.

On the 3rd of October last I remedied the defect in the upper lip by an operation similar to that for hare lip, and at the same time closed a part of the left nostril, and enlarged the right, by which means the nose was made nearly symmetrical.

At this time the organ appears fixed, and not likely to undergo any further change; it is as good as any that I have seen formed by similar means.

The advantages resulting from the operation have been manifold, and greater than I expected; for not only has the patient got rid of a shocking deformity, but he is now free from a dryness of the nasal cavities, and of the pharynx, which had continually distressed him; and his voice, which was before extremely indistinct and unpleasant, is now clear and perfectly audible.

Observations.—The history of the case, as far as regards the influence of the syphilitic virus on a patient of weak power and scrofulous diathesis, is by no means uncommon; for although such cases are not so frequent as they were some twenty or thirty years ago, yet our large metropolitan hospitals usually afford examples somewhat analogous. There is scarcely any surgical class of disease in which a greater revolution has taken place in the treatment (within the period I have mentioned) than in syphilitic affections. Mercury, which was formerly considered as a specific in most of these cases, is now confided in by few, is looked upon as a useful auxiliary in the treatment by the many, and is rejected altogether by others. My own experience induces me to consider it as a salutary and useful remedy in very many cases, but certainly not a specific; and I believe many will agree with me when I say that there are cases, as the present one, in which mercury aggravates rather than alleviates the disease. Some such cases as I allude to are relieved by sarsaparilla, and very small doses of mercury; some by sarsaparilla alone; and I have known some do well under means of great variety, but tending to one principal object,

viz. the restoration and support of general power.

But in most of these cases the recovery has been very tardy, and often protracted by frequent relapses, and some progressed in spite of all our care, and destroyed life either by exhaustion from continual suffering, or by the extension of the disease to vital organs

Few will, I think, deny that a more powerful remedy was wanting to enable us to combat the most formidable cases of secondary syphilitic disease with any thing like certainty of success.

The influence of the preparations of iodine, as far as present experience goes, will almost warrant us in coming to the conclusion that the much desired remedy has been found. The case I have related was one of the first in which I tried this remedy, and I have but feebly detailed its effects. I have never seen such rapid influence produced upon general and local disease by any other remedy.

I have for the last two years employed it in all the varied forms of secondary syphilitic and of scrofulo-syphilitic diseases; in the affections of the throat, of the skin, of the fibrous tissues, &c. I have also given it in many cases of primary disease, and with excellent effect, when the local action has been unusually disordered.

Further experience is of course necessary to enable us to form very accurate opinions respecting the use of such a remedy; but I shall briefly state my opinions of it, resulting from the experience I have had. I have found its effects most rapid in secondary syphilis, modified by scrofula, when the general power has been depressed, and a morbid irritability has existed.

In all cases where it acts beneficially it produces rapid effects on the general health; it increases appetite, augments the force of the circulation; it lessens nervous irritability, and subdues local pains.

Almost as soon as its influence is apparent in the system, the local affections undergo salutary changes, without the aid of other than the most simple applications.

There are circumstances, however, under which its exhibition must be delayed or laid aside; as when the stomach is very irritable; when there is a tendency to or an actual state of diarrhœa; again, when the secretions from the alimentary canal are ill-conditioned, or when there is constipation.

The form I prefer is that which I have described as the mistura potassæ hydriodatis. Sometimes I omit the poppy syrup, and sometimes I omit the iodine, giving the hydriodate of potash simply. These alterations are determined by circumstances afforded by respective cases; thus, if there be no nervous irritability, if there be headach, or tendency to confined bowels, I omit the poppy; if the stomach is naturally irritable, I omit the iodine, &c.

I have hitherto found the small dose I have mentioned quite sufficient; and in some cases have been obliged to diminish it, as it created nausea.

The mistura potassæ hydriodatis does not disorder the stomach so soon or so frequently as Lugol's solution, or other somewhat similar formulæ that I have tried.

In many cases I have found much benefit from giving at the same time small doses of mercury, as a grain or two of the hydrarg. cum cretâ or blue pill, or every second night, to promote a proper degree of biliary secretion.

Like all other remedies, it must be given at proper times, and under circumstances favourable to its use. I am satisfied of its being a very valuable remedy, and hope that an indiscriminate and improper use of it will not bring discredit upon it. When I have had more experience I may have opportunity to offer some farther observations on the use of this remedy, in a more connected and extended form than I am at present able to do.

I shall in conclusion offer a few remarks on the operation and its effects.

With the exception of the introduction of an artificial support, I believe there was nothing novel in the plan I pursued, but it may nevertheless be useful to detail the principal difficulties.

In calculating the extent of the flap of integument to be raised from the forehead, full allowance must be made for the turning and for the after-contraction. If the flap is to remain connected to the right side, in turning it down the sides become reversed; that which had been to the right being placed afterwards to the left, and the left to the right. Supposing them to be of equal length, after being turned down, that on the right side would be relaxed, and that on the left be stretched out; to obviate this, the left side of the flap should be made considerably longer than the right; if the integument which is to form the flap varies much in thickness, a further allowance should be made, as the thinnest portion will afterwards contract most.

In another case, if I made the septum with the flap, I should secure it first, as I experienced some difficulty in doing so after I had fixed the flap itself. If, however, the forehead was not sufficiently large to afford integument for the septum, without encroaching on the hair, I should form the septum subsequently from the upper lip, as recommended by Dieffenbach.

Short curved stiff needles enabled me to pass the sutures with great ease; and I much prefer the small silk or thread ligatures to the metallic thread, or metallic pins. I have used the last two in other operations, but cannot detect any advantages in their use.

The experiment of the platina frame as a support failed only, I consider, from peculiarities in the case, and from my having given it a figure which made its displacement easy. I am perfectly satisfied that such a support might be used with good effect, and without its producing any mischief; the want

of such aid renders the new formed organ usually irregular and misshapen; this has been the case in every instance which I have seen.

Before the parts are adapted and fixed by sutures, the surgeon should wait until all hæmorrhage which may be likely to interfere with the surfaces has ceased, otherwise coagula may be deposited, which would prevent adhesion.

In the after-treatment the patient should be kept recumbent, and at perfect rest, and should be desired to suppress an inclination to cough or sneeze. There is no fear of the part suffering from want of warmth: the warm air from the lungs keeps up sufficient heat. I think it not improbable that the part might be so heated and distended as to require the influence of cold, and the erect posture to check mischief. I should, however, not consider it prudent to apply cold without evidence of its necessity.

As soon as the union is firm, the sutures should be removed, to prevent their irritating and exciting ulceration.

The loss of the nose not only produces conspicuous deformity, but subjects the patient to consequences which materially affect his comfort and health. The constant dryness of the nasal cavities and of the pharynx, with frequent soreness of the latter, disturb the rest, and affect the appetite; and the effect on his articulation is such as to render it extremely indistinct and unpleasant. He is, by his misfortunes, almost an outcast from society.

Are we not then warranted in urging the performance of an operation by which most of these evils can be remedied—which is not attended with risk, and which, if carefully conducted, can hardly fail? Such is my impression, from the result of the present case, and others which I watched.—*Medical Quarterly Review.*

WESTMINSTER HOSPITAL.

Enlargement of the Lingual Papillæ.

Some of the cases, which have lately presented themselves among the out-patients, have been of some little interest. A man, a coachman by trade, came to the hospital twelve days ago, under the impression that, in cutting his nails, a portion of one of them had got into his mouth, and fixed itself into the tongue. The part he pointed out was far back, near the right anterior palatine arch;—a rigid examination, both visual and digital, was instituted, and with the effect of satisfying the examiners that there was not any part of a nail there, the only thing which could give rise to such an idea being the enlargement of two or three papillæ, which had assumed a cartilaginous hardness. The coachman, however, was not satisfied, some *placebo* was given, and he was told to call again. On his second visit, finding him still unconvinced, a portion of a nail of one of the pupils was secretly introduced into the mouth, and then triumphantly withdrawn, and shown to the man. For a moment or two he seemed to believe in the stratagem which had been played upon him; still, however, the old feeling seemed to recur to him. He paid the hospital a third visit, when the enlarged papillæ were removed with the scissors, this was apparently sufficient, and he did not show himself again.

Congenital Phymosis.

On Wednesday the 24th of December, a little boy, about 5 years of age, was brought to the hospital by his mother, because he appeared to suffer great pain and difficulty in making water. On examination, phymosis with occlusion of the orifice of the prepuce was found to exist. A ligature was put loosely round the prepuce, so as to keep back the glans, and the free portion excised with a pair of scissors; the inner membrane of the foreskin was not divided by this cut, and it therefore required to be repeated. When this had been done an attempt was made to draw back the remaining portion of the prepuce, but it was adherent all around to the glans penis, and it was necessary to separate it.

The little patient was brought again a day or two afterwards, and he then could make water easily.

AUTOPSY OF A CHILD, ELEVEN YEARS OF AGE, WHO WAS THE SUBJECT OF CONGENITAL LUXATION OF THE FEMURS.

Germaine Josephine, who was under the care of M. Breschet, and who died of phthisis pulmonalis, was examined on the 22nd.

The heads of the thigh bones were found in the external iliac fossæ, covered over by the gluteus maximus muscle, and situated between the gluteus medius and minimus, lying close to the lateral edges of the sacrum. Not the least depression was found to exist on either of the dorsum ilei. The tendons of the pyriformis, gemelli, and obturator internus passed from below upwards, around the head of the femur, before they reached their insertions. The tendons, also, of the psoas and iliacus muscles were directed from within outwards, and from below upwards, to arrive at their point of insertion in the lesser trochanter.

The head of the femur was scarcely deformed, it was, however, somewhat flatter than natural on the surface that laid on the ilium.

The cotyloid cavity was narrow, and not so deep as natural. The ligamentum teres was wide, like a ribbon, and of much greater length than natural. A large quantity of synovia was found within the capsular ligament. The cotyloid cavity was, as usual, surrounded by the cotyloid ligament. Diarthrodial cartilage lined the cavity, and the usual vascular synovial glands were found between the bifurcated origins of the round ligament.

APOTHECARIES' HALL.

Names of Gentlemen to whom the Court of Examiners granted Certificates of Qualification on Wednesday, 24th Dec.:—George Henry Bore, Ryde, Isle of Wight; William Phillips, Brockton Grange, Salop; Robert Ellison Gorst, Cheshire; James Shaw, Manchester; John Thos. Harland, Ashbourne, Derbyshire; William Harris Green, Woburn, Bedfordshire.

MISCELLANY OF FACTS.

Dr. Von Wiebel, Body Physician to the King of Prussia, and Physician to the General Staff of the Army, has been presented by his royal master with the order of the Red Eagle of the second class.

We feel pleasure in recording the following honourable act on the part of the French Government. The son of a poor English veteran officer, who is residing with a large family in France, has been admitted into the Medical Department of the Navy at Brest, where he has received the most marked kindness and attention from the heads of the establishment: and in acknowledgment of his talents the French Government have given him the rank and pay of an assistant-surgeon in the French Navy, while he continues to belong to the Naval Hospital.

APPOINTMENTS.

Naval.—Mr. W. C. Lamb to be assistant-surg. to the Speedy cutter. Mr. J. Christie, supernumerary assistant-surgeon to the Victory. Mr. Charles Smith, assistant-surgeon to the Royalist. Mr. Isaac Dias to be assistant-surgeon to the Portsmouth Division Royal Marines, vice James M'Conkey, retired on half-pay.

Military.—It was Mr. F. Barnett, M.D., not Mr. Benett, M.B., who was lately appointed assistant-surgeon to the Forces.

General.—Mr. J. Harrison Curtis, aurist to the Commercial Travellers' Society.

India.—Fort William, July 19.—Assistant Surgeon T. Russell, to attend on the Lord Bishop of Calcutta during his August visitation. Assistant-Surgeon W. Stevenson, jun., attached to the Civil Station of Cuttack, to the medical duties of the settlement of Malacca, vice Assistant-Surgeon Boswell, proceeded to Europe. Assistant-Surg. C. Wray Fuller, to officiate as Civil Assistant-Surgeon at Kishnagur until further orders. Assistant-Surgeon J. Anderson, M.D., to officiate as Civil Assistant-Surgeon at Beerbhorne until further orders.

DEATHS.

Dr. H. Thompson, of Little Bath House, Tunbridge Wells. Assistant-Surgeon Archibald, 40th Reg. Dr. Hunt, assistant-surgeon to the Forces. Surgeon Dr. Whistler, half-pay on the Staff. Assistant-surgeon Dr. Hunt, of the Staff at Ceylon. Apothecary Wm. Williams, of the Military Service. Dr. Simon Sheil, of Ballyshannon.

WEEKLY BILLS OF MORTALITY.

London, Tuesday, Dec. 23, to Tuesday, Dec. 30.

Abscess	1	Inflammation of the Brain	5
Age and Debility	78	Inflammation of the Lungs and Pleura	17
Apoplexy	15	Influenza	1
Asthma	38	Insanity	2
Childbirth	6	Jaundice	2
Consumption	105	Liver, Diseased	3
Convulsions	64	Measles	32
Croup	8	Mortification	4
Dentition, or Teething	15	Paralysis	3
Dropsy	21	Rheumatism	1
Dropsy on the Brain	32	Small Pox	19
Dropsy on the Chest	5	Sore Throat & Quinsy	3
Fever	10	Spasms	1
Fever, Intermittent or Ague	1	Stone and Gravel	1
Fever, Scarlet	18	Stricture	1
Fever, Typhus	3	Thrush	3
Gout	1	Venereal	1
Heart, Diseased	3	Worms	1
Hooping-Cough	24	Unknown Causes	5
Inflammation	57		
Inflammation of the Bowels & Stomach	5	Stillborn	27

Males 344 Females 309 Total 753

Books for Review in our next.

CORRESPONDENTS.

We have received several letters respecting our dispatch to Portsmouth; in answer, we must refer our correspondent to the pages of the present number.

London University Student.—The cases now in Dr. Elliotson's wards at the North London Hospital, showing the absurdity of the homœopathic doctrine, shall be inserted in our next. We consider them good illustrations, and are much obliged to our correspondent for forwarding them.

The paper sent to us from *W. S.* as a review, is written too personal and too hasty to be inserted. We beg also our correspondent who signs himself *H. S.* to understand, we never admit *cut* and *dried* reviews.

Medicus.—Our correspondent is a liberal indeed in his principles of reform, if his suggestions with regard to the medical profession were carried into execution we would recommend every person now entering into it without delay to beseech his friends to apprentice him to a shoemaker, tailor, or some other thriving trade. Such principles are absurd: we wonder he should waste his time in scribbling such nonsense.

METEOROLOGICAL JOURNAL.

MONTH. Dec., 1834.	Moon.	Thermom.			Barometer.		De Luc's Hygrometer.		Winds.		Atmospheric Variations		
25		42	46	39	30·13	30·15	82	82	N.N.W.	N.W.	Fine	Fine	Fine
26		40	44	39	30·28	30·34	82	83	N.	N.N.W.	——	——	——
27		41	41	36	30·31	30·31	83	83	E.N.E.	E.N.E	Foggy	——	——
28		38	41	35	30·25	30·20	83	82	E.	E.	Fine	——	——
29		38	50	38	29·95	29·84	82	85	S.E.	E.N.E.	——	——	——
30	☽	50	54	49	29·73	29·73	85	88	S.	S.	Cloudy	——	Cloudy
31		54	55	47	29·60	29·60	88	85	S.	S.S.W.	Rain	Rain	——

The quantity of rain fallen in December was 88-100ths of an inch.

50, *High Holborn.* WILLIAM HARRIS and Co.

All Communications and Books for Review to be forwarded (free of expense) to the Publisher, 356, Strand, near King's College.

THE

London Medical and Surgical Journal.

No. 154. SATURDAY, JANUARY 10, 1835. Vol. VI.

LECTURES

INTRODUCTORY TO THE COURSE OF THE

INSTITUTES OF MEDICINE,

DELIVERED BY

ROBERT J. GRAVES, M.D.,

King's Professor, Dublin.

LECTURE V.

Gentlemen,—At my last lecture, I alluded to some of the effects of temperature on animal bodies, and mentioned some circumstances calculated to throw light on the nature of climate, and its influence on the human race. I told you that other animals are provided by nature with a covering to protect them from the severe cold to which they are unavoidably exposed, either from the change of season or the peculiarities of the places they inhabit. Thus animals residing in the Arctic seas, as the whale, walrus, &c., are furnished either with vast quantities of fat, or with skins which are bad conductors of caloric, and land animals, such as the Greenland bear, are equally protected by a warm coat of fur. Habit, however, will do a great deal towards reconciling animals to change of climate and varieties of temperature. Among the rest, man seems to be pre-eminently distinguished for the facility with which he can adapt himself to vicissitudes of temperature and change of climate. When fortified by habit he can, even without the aid of clothing, bear a very considerable degree of cold. We are told by travellers that the naked New Zealander will rise in the morning from his lair, leaving the green print of his body on the grass, all around being whitened with hoar frost. A few similar instances of the power of habit in resisting cold are still met with, but it is chiefly among barbarous tribes, and the necessity of clothing is now universally felt by civilised man, whose reason and industry enable him to people the whole surface of the globe as far as the limits of the Arctic and Antarctic circles. The negro of Africa exhibits a striking contrast to the New Zealander, for we are told by Clapperton that the blacks appeared chilly and suffering whenever the thermometer sunk to seventy degrees, and on such occasions they betook themselves to the aid of clothing, to guard against the effects of so unusually low a temperature!

Some countries are fortunate in the enjoyment of a climate exempt from remarkable vicissitudes of temperature; there are no sudden transitions from heat to cold, nor does the summer differ much from the winter. Here it is natural to expect that animal and vegetable life will flourish, and that diseases connected with atmospheric changes will be few in number and mild in character. Of this New Holland, which enjoys a very uniform temperature, furnishes an apt illustration. Vegetables and shrubs are here evergreen, and the groves and forests are clad in a perpetual verdure. There is no shedding of leaves in winter, and nature presents the whole year round all the luxuriance of summer. Another peculiarity also distinguishes this country; its inhabitants enjoy a total immunity from measles, hooping-cough, and scarlatina. None of these disorders have as yet penetrated into New Holland. Where they exist among the passengers at their departure from these countries, the length of the voyage is so great, that they appear to die away completely before the vessel reaches its destination. It is, however, probable, that if the rate of passage be accelerated by means of steam-vessels, the New Hollanders will not long enjoy this immunity.

There is no subject so interesting, or abounding in curious facts, as that connected with the various provisions nature has made to enable animals to subsist in different climates, and in a great variety of situations. Although the facts connected with this topic belong to the natural historian rather than to the physiologist, yet there a few considerations which suggest themselves to the latter as particularly deserving of notice.

He who has contemplated the more fertile regions of the earth, their luxuriant productions, and dense population, must be struck with horror when he beholds the deserts of Arabia and Africa, and sees around him a

vast extent of dry and burning sand, unfavourable alike to animal and vegetable life. But when he comes to examine the structure of the camel, he finds, in the peculiar conformation of its foot and stomach, a beautiful illustration of the care which nature has taken in adapting animals to particular localities. Again, in the lamas of South America, he finds another variety whose structure is as evidently fitted for another kind of dry and arid soil; hence he is led to the inference that the sandy deserts of Africa, as well as the steppes of America, not only existed before the camel and lama were created, but were formed with such a relation to these animals, that each is mutually adapted to the other. From this it may be inferred that the desert is not an accidental defect and unplanned eyesore on the earth's surface, owing its existence merely to the effects of a destructive power defacing the fair form of nature, but is a settled part of the great scheme of creation.

When we come to the subject of animal function, I shall bring forward some facts with respect to the difficulty or facility which different animals have in accommodating themselves to varieties of temperature. It would appear that some animals, particularly those which inhabit the colder latitudes, enjoy a very limited range. Among these may be mentioned the reindeer, the Esquimaux dog, and the arctic or great white bear. All the Esquimaux dogs brought to this country have perished. Arctic bears when imported suffer very much from the change of temperature, and, in order to keep them alive for any length of time, it is necessary to maintain a certain degree of artificial cold in the places where they are kept. You are all aware that Captain Ross, after having spent four years in the arctic regions, became so habituated to cold, that on his return he found it quite impossible to bear the warmth of a London winter, and was forced to remove to a colder and more congenial situation. Every attempt to introduce that beautiful and useful animal the reindeer into England or Scotland, has invariably failed, though in the latter country the moss which constitutes the principal part of its food grows in great abundance. About fifteen years ago I dissected two reindeer that died here, and found that in both inflammation and enlargement of the liver was the cause of death. On the other hand, it is equally curious that most animals brought hither from tropical climates die of some form of scrofula. Monkeys die of consumption; so do lions and tigers. The dromedary which died here some time ago, and which was dissected by Dr. Houston at the College of Surgeons, had tubercles developed in almost every organ of the body. This is a very important fact in the pathology of phthisis, as tending to prove that although phthisis is in many instances distinctly hereditary (for tubercles have been found developed in the lungs of the fœtus), nevertheless, it may be, and is, frequently acquired. Nothing can furnish a stronger proof that phthisis may be acquired than the instances I have adduced, for I need not tell you that no lion or tiger is ever born in warm climates of a consumptive sire, or ever dies there of tubercular disease. An additional illustration of the influence heat exercises on the size of the liver is afforded by the celebrated Strasburg geese. By feeding these birds in a particular way, and keeping them in artificial heat, the liver becomes diseased, grows to an enormous size, and in this state furnishes the materials of a paté, much sought after by the scientific gourmand *. We observe also, that the English in India suffer greatly from liver disease, while, on the other hand, negroes and natives of warm countries frequently die of phthisis in England.

I may observe here, that plants and animals exhibit very striking analogies as to the manner in which they conduct themselves with respect to change of climate. It is, however, well known that animals are in general better adapted to bear the vicissitudes of temperature and change of climate, than plants. Take the whole vegetable kingdom, and you will not find any individual of it so extensively diffused as you will find some animals. Man is found in every part of the habitable globe, crows also extend over the earth, several birds, and some of the mammalia, as the sheep, dog, &c., have a very extensive range. Among the individuals composing the vegetable kingdom we do not meet with examples of this general diffusion, and we observe that many are limited to inconsiderable districts, or peculiar localities. Generally speaking, it is much easier to introduce a plant, or animal, from a hot into a cold, than from a cold into a hot country, because our means of producing heat far exceed those we possess for generating cold. Thus we are enabled, by artificial heat, to keep tropical birds, lions, and tigers in this country, and by means of stoves and glass-houses to preserve plants from the hottest countries, but we find it extremely difficult to rear the plants or animals of high northern latitudes.

In concluding these cursory remarks on temperature, I may observe that the study of climate is a matter of important consideration to the physician. I have already stated, that the two principal circumstances, which determine the nature of climates, are, their distance from the equator, and their height above the level of the sea. But there are other causes which modify climate in a very remarkable degree, of which we have a striking example in comparing the climate of Dublin with that

* How many instances occur where our citizens exposing themselves to the long continued operation of the very same causes, confinement, overfeeding, heat, and want of exercise, are affected by them in exactly the same way. How slight the difference between the morbid phenomena, displayed in the *post mortem* of a city feaster and the *autopsy* of an overfed goose!

of Berlin, or that of Ireland with that part of Siberia which lies within the same parallels of latitude. But not only do we observe this difference between the climates of different countries, but, even in the same country and at very inconsiderable distances from each other, do we find places presenting a very appreciable difference of temperature. A knowledge of these minute shades of difference is worthy of the attention of the physician, and may be available on many occasions during his professional career.

Let me now direct your attention, gentlemen, to the consideration of an agent, whose influence is more closely connected with the phenomena of life than any other,—I allude to electricity, to which, as well as galvanism and magnetism, there is every reason to believe that vitality bears a very intimate relation. Thus we see that electricity exerts a very powerful action, not only on animal bodies but also on plants and vegetables. If you pass an electrical spark through the leaves of the sensitive plant, it will exhibit a considerable degree of irritability, and will continue to move as long as it is acted on by the electrical stimulus. You are all aware, that trees are frequently killed by lightning. The common opinion on this point is that they are burnt, and so they are when the shock is intense; but we have reason to believe that trees are often killed by doses of lightning, sufficiently intense to produce an impression on their vitality, and that they die not from any scorching or burning, but from the violence of the shock given to their living systems *. Various experiments have been made with the view of investigating this point, and the result has been that an overdose of electricity will destroy the life of any plant. Carvalho killed the balsamina impatiens by shocks too slight to impair its structure. A branch of this plant died the day after receiving the shock, the rest of the plant lived for a few days longer. The branches of other plants survived for a greater length of time; thus, a laurel lived fifteen days, and a myrtle thirty. Van Marum and Nairne confirm the fact of the deleterious effect produced on plants by strong electrical shocks, showing that they kill plants and prevent slips from taking root, or budding. On the other hand, small doses of electricity are said to exercise a favourable influence on plants, accelerating their growth, and making vegetation more luxuriant, but it must be confessed that this is by no means certain.

It has been believed that plants are furnished with contrivances to enable them to preserve the electrical equilibrium. Dr. Prout supposes that the down, which covers plants so copiously, has a relation to electricity, and is destined to act by means of its numerous points in restoring and maintaining the electrical balance. We are not, however, acquainted with any plants which give out spontaneously electrical sparks, nor have we as yet been able to detect in them the existence of an apparatus, destined to accumulate electricity.

M. Pouillet has made some very interesting experiments on the development of electricity by growing vegetables, and from which it appears, "That the action of vegetables upon the oxygen of the air is one of the most prominent and powerful causes of atmospheric electricity. If, indeed, we consider that one *gramme* of pure carbon disengages, in the act of passing into carbonic acid, electricity enough to charge a Leyden jar, and that, on the other hand, the carbon, which enters into the constitution of vegetables, does not disengage less electricity than pure carbon when burned; if we take this account we might, *à priori*, arrive at the conclusion pointed out by my experiments, viz. that a vegetating surface, one hundred metres square in extent, produces in a day more vitreous electricity than would be sufficient to charge the strongest electrical battery." —*Annales de Chimie et de Physique*, tome xxxv. p. 420.

Some difficulties attending the manipulation and management of so very delicate a series of experiments, prevented M. Pouillet from observing whether the electricity evolved by day differs, either as to quantity or quality, from that disengaged by vegetation during the night. Were these difficulties overcome, it seems more than probable that an interesting confirmation of the facts observed by Priestley and Ingenhouz would be discovered, for as plants are found during cloudy weather, or at night, to exhale carbonic acid, and during exposure to the rays of the sun to exhale oxygen (instead of absorbing it as they do in the dark to form carbonic acid), it is obvious, that these two contrary processes will be attended with opposite effects upon the electricity of the air. Now, as, on the one hand, Pouillet found that carbonic acid, at the moment of its formation, is always positively electrified, it follows that plants must produce, by means of the expiration of this acid, a quantity, more or less considerable, of positive electricity, which they thus impart to the surrounding atmosphere; as long as night continues, or the weather is cloudy, this process is carried on, and that with considerable energy, by the whole surface of vegetation in every country, and therefore this period of the twenty-four hours exercises an influence on the electricity of the atmosphere, tending powerfully to augment the quantity of positive electricity it contains. Where, however, this same surface of vegetation is exposed to the bright light of day, or the direct rays of the sun, oxygen is no longer absorbed; it is now exhaled, and consequently vegetative electricity is evolved. When we recollect the prodigious

* It has been more than once remarked, that a tree, whose shade had afforded shelter to cattle, and to which they resorted for protection during the heats of summer, is avoided by them with the greatest caution where it has been blasted by lightning.

activity of vegetation in tropical climates, where day and night differ comparatively little in duration, we at once perceive that we have discovered the existence of causes, whose effects must be most powerful on the electrical relations of the atmosphere. Again, when we call to mind the researches of Pouillet on the effects of evaporation, we find that this process, as it takes place from the surface of the sea, must tend to render the superincumbent atmosphere positively electrical, and that too with most intensity during the day, at the very time when the agency of terrestrial vegetation is rendering the air over the land negatively electrical, we get as it were a glimpse at the reason why tropical islands, such as those of the West Indies, must necessarily become the scene of violent electrical phenomena. The period of the day, at which hurricanes and thunder storms occur there, strongly favours this explanation. The sun rises unclouded, and both land and sea, exposed to the full power of its rays, discharge from their respective surfaces vapours loaded with opposite electricities. This process continues during the whole forenoon, and until two or three o'clock in the afternoon; about that hour the encounter generally commences, when the vapours forming clouds, charged with opposite electricities, these clouds mutually attract each other, until, finally, the sudden union of their electric fluids gives rise to phenomena, of which our most violent storms are but feeble representatives. How wonderful are the operations of nature! The peaceful and silent growth of a vegetation, whose splendour fascinates the eye, develops an agency which, opposed to that produced by a rapid but unobserved evaporation from the surface of the surrounding ocean, tends to load the atmosphere with conflicting elements, from the depths of whose strife issues thunder, proclaiming the approach of the hurricane and tornado *.

The effects of electricity on animal bodies are equally remarkable, but, as they are generally known, I shall only advert to them briefly. Dead animal flesh, when exposed to strong and repeated electrical shocks, putrefies rapidly. Living animals, even the largest and most powerful, are instantly destroyed if the electrical fluid be administered in a sufficient dose. The shock produced even by a moderate quantity is generally ungrateful to the feelings, and hence it is that some sensitive persons suffer great bodily distress during a thunder-storm. This is attributed by persons ignorant of the intimate connexion between electricity and the nervous fluid to fear or fancy, but in some cases with little justice, for the bodily inconvenience felt under such circumstances is sometimes extreme. "During a thunder-storm the air is generally loaded with a great excess of electricity, which cannot escape into the earth on account of the want of moisture. The consequence must naturally be the appearance of various electrical phenomena. Thus, on the 8th May, 1831, the whole atmosphere appeared on fire after sunset in the neighbourhood of Algiers. White flames were seen at the points of the flag-staffs on the ramparts for the space of half an hour, and the points of the hair of some officers who were walking seemed to be tipped with a similar luminous appearance. On raising up their hands they were astonished at perceiving similar points of light issuing from the tops of their fingers. *All the persons who were exposed to the influence of this highly electrified air experienced spasms in their limbs, and an extreme state of lassitude*.*" On the other hand, artificial repletion with the electrical fluid is known to produce in many persons an exhilaration of spirits. Mr. Smith, of Fordham, states, that in eight persons through whom the electrical influence was passed, the pulse was invariably reduced in frequency after fifteen minutes.

You are aware of the effects which electricity produces on the economy in various forms of disease. Tumours have been absorbed, dropsies cured, asthmas relieved, and paralysis removed. You are also aware that electricity manifests its effects in a more uniform and constant manner, as shown by the sensation of heat and muscular contraction to which it gives rise, and that these effects may be produced by shocks, sparks, or through the medium of the electrical aura. It has been related by Mr. Smith, of whose experiments I have already spoken, and the facts are referred to in the last edition of Edwards's work on the Influence of Physical Agents on Life, that ague has been cured by electricity; that it reduced the pulse thirty beats, stopped the cold stage, and prevented the paroxysm altogether. But a more curious fact than this, and one which, if likely to be confirmed, would be deserving of the most accurate investigation, is, that the vaccine virus, by means of a current of the electrical fluid, may be made to pass from an infected person along a wire, so as to convey the infection to a

* The above theory, which suggested itself to me at lecture, when speaking of the effects of vegetation in developing electricity, may perhaps be tenable. M. Auguste Delarive, however, is not inclined to allow that the electricity of the atmosphere, its vapours and its clouds, can be derived chiefly from vegetation, and the chemical actions (including evaporation) which take place on the surface of the land and waters. These causes he thinks insufficient to account for the great quantity of electricity the atmosphere contains. In this opinion Becquerel concurs. I am nevertheless induced, by what Pouillet says, to think that the quantity of electricity thus developed must be enormous, particularly in tropical climates.

* Voyage dans la Regence d'Alger. Par M. Rozet.

scratch or abrasion of the skin in the arm of a person to whom the other end of the wire is applied.

You are aware of the passage of the saline constituents from one vessel to another, through the medium of the connecting wire, in cases of chemical decomposition, effected by means of electricity, a very remarkable phenomenon, and one which affords some reason to suppose, that the fact just now mentioned respecting the transmission of the vaccine virus may be true.

I shall postpone to a future opportunity a detail of the facts by which Dr. Wilson Philip has attempted to prove the identity of the nervous and electrical influences. I shall also defer an account of those researches which have been made on the subject since the publication of Dr. W. Philip's theory, merely remarking, for the present, that these researches have tended somewhat to shake the validity of his opinions, though they have not impugned the facts on which those opinions are grounded.

Dr. Wollaston, having observed the great rapidity of chemical decomposition produced by this agent (and, indeed, at present chemical and electrical action are considered to be very analogous, if not exactly the same), was led to think that all the secretions of the body were the effect of electrical action operating in various modes, and producing from one organ a serous, from another a mucous, from a third a salivary, secretion, and so of the rest. In order to prove the possibility of chemical decomposition being effected by very weak electrical agency he made an experiment, by which it appeared that a solution containing muriate of soda was decomposed by a single pair of plates. He was of opinion that the qualities of each secretion pointed out what species of electricity preponderated in each organ. Thus he concluded, as Napoleon * had already done, that the superabundance of acid generally present in the urine proves that positive electricity prevails in the kidneys, while the alkaline nature of the bile marks an excess of negative electricity in the liver. The minute anatomy of glands has of late received most valuable additions from the labours of Müller and other German physiologists †, but as yet no one has attempted to prove that there is any thing in their structure evidently designed for the accumulation of electricity. Wollaston's hypothesis appears to me, notwithstanding, the most probable explanation of secretion which has been yet advanced; and it is by no means impossible that future investigations may succeed in detecting something of those physical differences which enable different glands to act upon the blood in so many different ways through the agency of electricity of various intensity and combination. That this agency is the means employed by nature for separating from the blood the elements necessary for each secretion, seems the more likely, when we recollect that the excretory ducts in every gland terminate in *cul de sacs*, through whose parietes these elements must transude. Electrical endosmosis alone seems capable of accomplishing this task.

The effects of electricity in curing or relieving certain diseases have been already mentioned, and we shall find, hereafter, that galvanism and magnetism have a similar power. One of the modes of applying electricity or galvanism lately resorted to is acupuncturation. On this subject I would refer you for information to the papers published by my colleague, Dr. William Stokes. Acupuncturation, in the common acceptation of the term, has been long in use among the Chinese, and particularly among the Japanese, with whom the whole art of medicine consists in teaching the names of diseases, and the number of needles to be employed in the cure of each. Its introduction into Europe is comparatively recent, and within my own memory. It has been found useful, and its efficacy seems to have been very considerably increased by passing an electrical current along the needle, as recommended by Dr. Stokes. There can be no doubt that, considering the nature of which the materials of the needle are composed, the principal value of this application depends upon electrical influence, and that acupuncture is to be chiefly regarded as affording a means of applying it more conveniently and directly to the part affected. In its simple state, however, acupuncturation has effected a great deal; and I would strongly recommend to your perusal the article on Acupuncturation, written by my friend Dr. Elliotson for the *London Cyclopædia of Practical Medicine.*

Another mode of applying electricity has been introduced by Dr. Blundell;—I say a mode of electricity, for it is now proved that the magnetic and electrical influences are identical. I cannot say much with respect to the particular value of this mode as a means of curing or relieving disease. Shortly after the publication of Dr. Blundell's experiments, two or three of my patients, who were attracted by the novelty of the results, and entertained very sanguine expectations of receiving benefit from the application of the magnet, made several experiments on themselves, but without any decisive result. One of them in particular, a lady of a literary turn, got a powerful magnet, in the hope of obtaining some alleviation of her complaint (tic douloureux), but, unfortunately, she did not receive the slightest benefit after a long and persevering trial. I would not, however, prejudge the utility of the magnet, or reject its use, on this account, as I feel convinced that it may be found applicable to the cure or relief of other affections, although, in many of those complaints in which much has been expected from its influence, it

* Becquerel. Traité de l'Electricité et du Magnetism, p. 164.

† See a paper on this subject in the first number of the *Dublin Medical Journal.*

has proved inefficacious. It has been asserted in the *Lancet* (the Journal in which Dr. Blundell's experiments first appeared), that one pole of the magnet produced a cessation, while the opposite one caused an increase of pain.

I had lately an opportunity of witnessing a case in which the patient, an exceedingly irritable and nervous gentleman, asserted that he could always distinguish one pole of the magnet from the other, by means of the different sensations they produced in the painful parts of his body. If reliance can be placed on the accuracy of the experiments made on the celebrated and unfortunate Caspar Hauser, there can be no doubt that magnets exert a powerful influence on the body, for he is said to have been always aware of the vicinity of a concealed magnet, or even of any common metal, in consequence of the exceedingly uncomfortable sensation it occasioned.

I do not allude here, gentlemen, to what has been termed *animal magnetism*, which has been supposed to consist in the transmission of certain influences from one animal body to another; nor is it my intention to take up your time with a recital of those wonderful performances which have recently engaged the attention of a scientific committee at Paris. During my residence at Berlin, I had ample opportunities of witnessing the deceptions practised by the professors of animal magnetism. Like every other new species of quackery it made a great noise at first, and gained several converts, but the Prussian Government (which ever watches carefully over the true interests of its subjects) saw through the imposition, and put a stop to their proceedings. I am fully impressed with the conviction that the boasted results of animal magnetism are chiefly attributable to the imagination. There are, no doubt, certain influences communicable, through the medium of the senses, from one person to another, as you may perceive in the well-known instance of yawning. Thus, if one person in a company yawns, many others will involuntarily do the same thing; and something similar may be observed in the case of laughing, sighing, &c. With respect to the stories that have been related of magnetic sleep and somnambulism, I need only say, that I look upon them as I do on other similar statements—in the light of gross impositions. The animal magnetisers have, however, taxed human credulity too far in their account of an operation said to be performed some time ago at Paris, in which we are gravely informed that a young woman was thrown into a magnetic sleep, and kept in that state while a surgeon was going through the different steps of the process of amputating her breasts, and, when all was over, she awoke at the bidding of the magnetiser, perfectly unconscious of having undergone any operation. If any thing were wanting to show that the whole system is a system of deception (I occupy your attention unwillingly), it would be the fact, that persons thus magnetised are said to become possessed of a species of second sight, and of knowledge not obtained through any of the usual avenues; that they answered questions touching the condition of persons far distant, and told facts and circumstances which had taken place, and of which they could have no cognisance. I can only say, in taking leave of this matter, that our spirit of investigation in Dublin is not sufficiently advanced to deem it necessary to occupy the attention of a scientific committee with a subject of so equivocal a character.

It is remarkable that no land animal, bird, or reptile, is provided with an apparatus for accumulating and propagating electrical influence. Among fishes, however, this is not the case, for we find six different species possessed of this provision, viz. the torpedo ocellata, torpedo marmorata, silurus electricus, gymnotus electricus, trichiurus Indicus, and tetrodon electricus. In all these there are electrical organs, which are charged and discharged at the will of the animal. They can also proportion the quantity of the electrical fluid discharged, and give a slight or strong shock according to pleasure. As long as the animal chooses, it remains quiescent, but whenever it approaches any object into which it wishes to discharge the electrical fluid, the shock is immediately given. It is in this way that they kill the different species of fish on which they subsist. The shock communicated by some of these animals is extremely severe. Thus a gymnotus, or great electical eel, by applying itself along the belly of a horse swimming in the water, is enabled to benumb and drown the animal in the course of a few minutes, by means of a quick succession of shocks discharged into his body along the region occupied by the heart, the great viscera, and the plexus cœliacus *. The shock is propagated by bodies which are good electrical conductors. Messrs. Humboldt and Bonpland were unable to detect any traces of free electricity in these animals, which Becquerel says may be explained on the supposition, that the shock, like that produced by a Leyden jar, depends on the sudden restoration of the electrical equilibrium. In many of those rivers in which the gymnotus electricus abounds, horses have been known, while in the act of swimming across, to be so much weakened by the repeated shocks, that they have become quite powerless, and sunk to the bottom, and it is even stated that they are sometimes sufficiently intense to kill the animal at once. Hence it is a common practice with convoys in South America, to collect a number of wild horses and drive them across these rivers, in order to exhaust the gymnoti of their electricity before the convoy passes.

It is a very curious and remarkable fact that the discharge of electrical influence is entirely subject to the will of these animals. This would seem to indicate a very close con-

* Humboldt.

nexion between electricity and volition, and if there was no other fact to show the intimate relation between electricity and the nervous influence, this would go far towards establishing the analogy. It would appear that this controul over its electrical power is necessary for the animal, in order to enable it to destroy its prey more effectually, for if it were obliged to discharge the whole of its electricity at once, or on very small objects, its stock would be too rapidly expended. On the other hand it has been observed, that, by giving out repeated shocks, these animals become exhausted and tired, another point of resemblance between electrical influence and nervous energy. Again, when we examine the electrical organs of these animals, we find that although they are not organs of locomotion, yet they are, like these organs and others in which a great quantity of nervous energy is expended, furnished with very large nerves. In some of these animals the nerves which supply the electrical apparatus are derived directly from the spinal cord; in most, however, they are derived from the fifth or eighth pair, sometimes from one, sometimes from another, and occasionally from both. This is a very curious and interesting subject for investigation, and I shall refer to it again when we come to speak of the functions of the nervous system. Indeed when we reflect that the electrical influence is completely under the controul of the will in these animals, that they can regulate the quantity discharged, making the shock strong or slight according to pleasure, that like the nervous energy it becomes impaired and exhausted by being exercised for a length of time without any rest or intermission, and that the apparatus in which it is contained is supplied by remarkably large nerves, every inquiring mind must be struck with the connexion between nervous and electrical influence.

LECTURES
ON
MIDWIFERY & THE DISEASES OF WOMEN AND CHILDREN;

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ASSISTANT PHYSICIAN-ACCOUCHEUR TO THE GENERAL LYING-IN HOSPITAL.

Delivered at St. Thomas's Hospital.

LECTURE XIII.

The Fœtus.

GENTLEMEN,—Having described to you the changes which the external parts of generation undergo after sexual intercourse for the first time, the changes consequent upon conception, viz. the rupture of a Graafian vesicle, and formation of a corpus luteum, the reception of its contents by the Fallopian tube, the secretion and formation of the decidua upon the internal surface of the uterus, the passage of the ovum into the uterus, and gradual development of this organ during the different months of gestation, the various appearances which the ovum presents at different times, more especially previous to and during the formation of the placenta; having described to you the gradual development of this vascular mass, by the ramifications of the uterine vessels on the one side, and the ragged vascular prolongations on the other, the functions which this organ (the placenta) performs, and the means by which the fœtus is nourished during the different periods of gestation, I now come to the last subject in this division of my course, viz. the formation and gradual development of the fœtus. The ovum when first expelled from the Graafian vesicle in the ovary, and conveyed by the Fallopian tube into the uterus, is at the lowest grade of animal life, since, in point of structure, it closely resembles the infusoria, hydatids, polypi, and other animals in the lowest classes of creation; as it gradually rises in the scale it begins to bear a resemblance to the yolk of the eggs of fish, amphibia, and birds. The ovum is a membranous bag, filled with an albuminous fluid, from which the intestinal canal is considered to have its first origin, and which in birds, where it becomes a species of receptaculum chyli, is called *yelk bag*, whereas in mammalia and in man, where it seems to have a different function, it has received the name of *vesicula umbilicalis**.

Fig. 1.

Fig. 2.

(Drawings of the ovum were distributed to the class †*)*

* Carus.

† The annexed wood-cuts are exact copies of the above-mentioned drawings, the explanations of which I here subjoin; the originals are in Carus's Gynakologie.

Fig. 1.—*a*, Vesicula umbilicalis; *b*, chorion; *c*, embryo.

Fig. 2.—*a*, Vesicula umbilicalis; *b*, chorion; *c*, vasa omphalo-meseraica (rudiments of the vena portæ); *d*, embryo.

The vesicula umbilicalis, as the first rudiment of the intestinal canal, may be compared to a stomach, and this must be considered as the commencement of the human ovum; it is covered by an external membrane analogous to the egg-shell in oviparous animals, and which, in the present case, receives the name of *chorion*; hence the ovum at first consists merely of a vesicula umbilicalis and chorion, but its development proceeds with great rapidity, and a number of little absorbing fibrillæ may soon be detected upon the surface of the chorion; in like manner as the chorion undergoes these changes so does the vesicle which it contains. Within this membrane (viz. vesicula umbilicalis) is formed the first trace of the spinal column, the central organ of animal life.

To fix with any degree of certainty the moment at which the human fœtus commences, is a question of extreme difficulty. The earliest period at which the presence of the human embryo has been detected, from the result of Sir E. Home's researches, is the second week after conception. Haller considered that the fœtus did not become visible until the end of the third week, but when we recollect the superiority of the instruments employed by Sir E. Home, and the rare dexterity which his assistant, M. Baner, possessed in the management of a microscope, I think we are justified in concluding that the embryo does become visible at an earlier period. The *manner* in which it first becomes visible is a question of not less difficulty; in fact, we must confess ourselves entirely ignorant of this interesting process. The only certain fact which we possess respecting the embryo at this early period is, that from its first commencement it is in immediate connexion with the membranes, and it has been a subject of no little controversy what part of the embryo is first developed, and what it is that we first discover. Meckel thinks that the first rudiment which becomes visible is the commencement of several organs at once, and, as in the lower classes of animals, what appears to be a perfectly homogeneous substance, is composed of several organs together; he is also of opinion that at the commencement the nervous system is connected with the membranes.

At first the body of the embryo has a more elongated form than afterwards, and the part which is first developed is the trunk, at the upper extremity of which a small prominence, less thick than the middle part, and separated from the rest of the body by an indentation, distinguishes the head. There are as yet no traces whatever of extremities or of any other prominent parts: the embryo has, in fact, the form and appearance of a worm; it is straight, or nearly so; the posterior surface slightly convex, the anterior slightly concave, and rests with its inferior extremity directly upon the internal surface of the ovum, or by means of an extremely short umbilical cord. From the vertebral column the parietes of the trunk and head gradually approach further and further towards the anterior surface of the abdomen and face until they unite. In this way the sides of the jaws close in the median line of the face, occasionally having the lips and palate not united, thus forming the hare lip and cleft palate. In the same way the ribs meet at the sternum, sometimes leaving that bone deficient and the heart exposed, as in certain rare cases of malformation, where the child has been born with the heart external to the parietes of the thorax. In like manner the parietes of the abdomen and pelvis close in the linea alba and symphysis pubis, occasionally having deficient the integuments of the navel, or, in other words, producing congenital umbilical hernia, or at the pubes a non-union of its symphysis with congenital prolapsus and inversion of the bladder. As the last is not a very common malformation, I show you here a specimen. The abdominal parietes, corresponding to the bladder, as well as the interior wall of the bladder itself, are wanting. This case is minutely described in the catalogue of the museum, and is well worth your examination. Nature here has endeavoured to make a substitute for the absence of a receptacle for the urine by dilating the ureters to a very unusual size, so that each ureter contains some ounces of fluid, which was expelled through the two orifices in the posterior wall of the bladder whenever the patient strained or otherwise exerted the abdominal muscles.

In man, and in other mammalia, merely a part of the vesicula umbilicalis in the form of intestinal canal is received into the cavity of the abdomen, whereas, in oviparous animals, the whole of the yelk bag enters the abdominal cavity, and serves the office of receptaculum chyli. In the former case it appears to be the first mould upon which the embryo forms itself, and which, as soon as its foundation (if I may so express myself) is laid, becomes useless and shrivels away.

In like manner, as the chorion and vesicula umbilicalis stand in the same relation to each other as the shell does to the yelk bag of the chick, so now is there a similar relation between the embryo and amnion. The embryo becomes loosely enveloped in an exceedingly fine membranous covering called *amnion*, which, in the human embryo, is quite devoid of vessels, like the epidermis, and forms a sac containing fluid called *liquor amnii*. The amnion envelops the fœtus with a double covering precisely in the same manner as the abdominal and thoracic viscera are covered by the peritoneum and pleura; and there is some reason to suppose that the portion which is in immediate contact with the embryo corresponds to the epidermis.

Fig. 3.

(*Preparations of the Amnion at a very early stage**.)

In many of the lower classes of animals respiration is performed by organs situated at the inferior or caudal extremity of the animal; (strictly speaking, however, it is not respiration, as this merely refers to air; it would be, perhaps, more correct to term it purification of the blood;) thus, for instance, certain insect tribes, as in hymenoptera, or insects with a sting, as wasps, bees, &c., in diptera, or insects with two wings, as in the common fly, and also the spider tribe, have their respiratory organs situated in the lower part of the abdomen. In some of the crustacea, as, for instance, the shrimp, the organs of respiration lie under the tail, between the fins, and floating loose in the water. Again, some of the mollusca, viz., the cuttlefish, have the respiratory organs in the abdomen. As we rise in the scale of animal life, we find that the next class, the fish tribe, have quite a different character of respiratory organs, viz., branchial processes or gills. We also know that many animals, during the first periods of their life, respire by a different set of organs to what they do when arrived at the adult state; the example of frogs and similar animals must be familiar to you all, living during their tadpole state entirely in the water. Likewise, in the higher classes of animals, the first development of organs for the purification of the blood, and in so far corresponding to some of the functions of the respiratory organs at a later period, is from about the region of the pelvis. In birds, this may be very easily demonstrated as a vascular vesicle connected to the extremity of the intestinal canal, and, in mammalia, to the bladder: in the latter class of animals it is called *allantois*. This gradually increases in size, and becomes situated between the amnion, chorion, and remains of the vesicula umbilicalis, containing the *liquor amnii spurius*, or *liquor allantoidis*.

Gentlemen, I have already remarked to you that in man, as well as in the whole class of mammalia, the vesicula umbilicalis, together with its vessels (the vasa omphalo-meseraica, from which the vena portæ is formed), soon separates itself from the intestine and becomes gradually obliterated; hence, as it does not go on to perform the function of receptaculum chyli, as is the case with the yelk bag of a bird's egg, it is evident that the embryo must have some other means of nourishment,—this I described in my last lecture. As the function of the vesicula umbilicalis soon ceases, and the nutrition of the embryo devolves upon the chorion and placenta, in like manner is the allantois an organ of such short duration in man, that we can only prove it to have existed by the presence of that canal which connects it with the bladder, namely, the urachus, and from the liquor amnii spurius, or liquor allantoidis, between the chorion and amnion. If we open the chorion of a human ovum at the second month, we find, as I have before told you, that a considerable space intervenes between it and the amnion. In many animals this space is distinctly occupied by the allantois, either in the form of a long loosely-attached membranous bag of exceeding tenuity, as in ruminating animals, or so firmly attached to the internal surface of the chorion and external surface of the amnion that it is almost impossible to demonstrate its existence as a distinct cyst, as in the horse and dog. From these facts, more especially as respects the two latter animals, we may assume that in all probability the allantois exists in man also, although, as with the vesicula umbilicalis, it becomes obliterated at so early a period, that we can only presume it to have existed by the presence of the liquor amnii spurius, or liquor allantoidis. The nearest approach to demonstrating its presence has been made by Hoboken, a Dutch anatomist; and certainly, when placed in warm water, we are able to separate a membranous substance from the external surface of the amnion; but whether this be the layer of cellular tissue which, according to Lobstein and Meckel, exists between the chorion and amnion, or actually the remains of the allantois, is difficult to say *.

It has lately been shown by Dr. Rathke, a distinguished German physiologist, that in certain reptilia, in the class aves and mammalia, two or more transverse slits may be observed on each side of the neck, opening into the pharynx, at a very early period of embryotic life; that these branchial processes or gills are supplied with vessels coming off from the main branch, much in the same manner as the branchial arteries do in fishes. In mammalia, especially, this structure is of very short duration, as the slits soon close and disappear. Until this moment the heart

* Fig. 3. About the fourth week.

a, Vesicula umbilicalis already passing into the ventricula and rectum intestine, *h*, *g*.

b, Vena and arteria omphalo-meseraica.

c, Allantois springing from the pelvis, with the umbilical arteries.

d, Embryo.

e, Amnion.

f, Chorion.

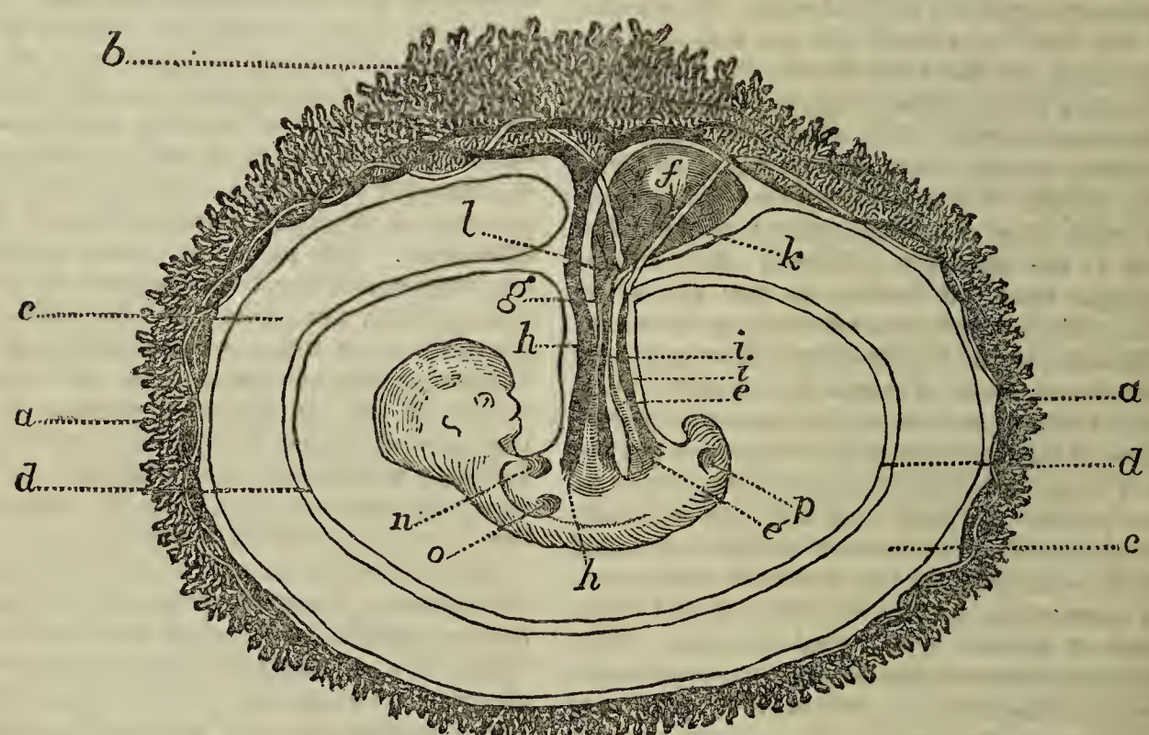
* For Note see next page.

is a single organ; but, as soon as the branchial formation ceases to exist, it becomes the double heart with its two auricles and ventricles. My time will not permit me to enter more fully upon this subject, but I merely mention this curious fact, to show you that the early periods of embryotic life exhibit a structure corresponding to an inferior type, but constantly varying, and successively rising in the ranks of creation, until, from the little vesicular germ, which could scarcely boast of more than a vegetable, or at the most a zoophytic, existence, the embryo gradually ascends the scale of animal life, increasing step by step in complication of structure, until it arrives at the most perfect grade, and stands the acknowledged lord of the creation.

The head now increases considerably in proportion to the rest of the body, so much so, that at the beginning of the second month it equals in size nearly half of the whole body, previous and subsequent to this period it is usually smaller. The body of the embryo becomes considerably curved, both at its upper as well as its lower extremities, although the trunk itself still continues straight. The head joins the body at a right angle, so that that part of it which corresponds to the chin is fixed directly upon the superior part of the breast, nor can any traces of neck be discerned until nearly the end of the second month; the inferior extremity of the vertebral column, which at first resembles the rudiment of a tail, becomes shorter towards the middle of the third month, and takes a curvature forwards under the rectum. When the embryo is nearly an inch long, the epidermis may be detected. Riolanus considers this to be about a month old; the body is covered with a species of mucus, like the white of an egg, which being removed appears like a membrane; the membranes contain about ʒ iij. of yellowish fluid. In the fifth week the extremities become visible, the upper usually somewhat sooner than the lower, in the form of small blunt prominences; the superior ones close under the head, the inferior ones near to the caudal extremity of the vertebral column. Both are turned somewhat outwards, on account of the abdomen being considerably developed. The superior extremities are usually directed somewhat downwards, the inferior ones somewhat upwards.

The vesicula umbilicalis may still be distinguished in the second month as a small vesicle, not larger than a pea, near the insertion of the cord, and external to the amnion. This you will see very well illustrated in the engraving of Dr. Hunter's work which I now show you. From the trunk (which, as in fishes, is almost entirely occupied by the abdominal cavity) arises a short thick umbilical cord, in which

Fig. 4.



* *About the Sixth Week.*

a, Chorion. *b*, The larger absorbing extremities, the site of the Placenta.
c, Allantois. *d*, Amnion. *e*, Urachus. *e*, Bladder. *f*, Vesicula umbilicalis.
g, Communicating canal between the Vesicula Umbilicalis and Intestines, which becomes obliterated; its remains form the Appendix Vermiformis, according to Oken.
h, Vena umbilicalis. *i*, *i*, Arteriæ umbilicales.
k, Arteria omphalo-meseraica. } Both these vessels begin to be obliterated at this time.
l, Vena omphalo-meseraica. }
n, The Heart. *o*, Rudiment of superior extremity. *p*, Rudiment of inferior extremity.

some of the convolutions of the intestines may still be traced. Besides these it usually contains the two umbilical arteries, and the umbilical vein, the urachus, the vasa omphalomeseraica, or vein and artery of the vesicula umbilicalis, and perhaps, even at this period, the duct of communication between the intestinal canal and vesicula umbilicalis, the rudiment of which, according to Professor Oken, forms the processus vermiformis. The hands seem to be fixed to the shoulders without arms, and the feet to adhere to the ossa ilii; the liver appear to fill the whole abdomen; the secundines externally are downy and whitish, and contain about ℥ vj. of water; at this time the ossa innominata, the ribs, and scapula, are cartilaginous.

In a short time the little stump-like prominences of the extremities become longer and are now divided into two parts, the superior into the hand and fore-arm, the inferior into the foot and leg; in one or two weeks later the arms and thighs become visible. These parts of the extremities which are formed later than the others are at first smaller, but as they become gradually developed the contrary is the case, and they become larger. When the limbs begin to separate into an upper and lower part, their extremities become rounder and broader, and divided into the fingers and toes, which at first are disproportionately thick, and until the end of the third month connected by a membranous substance analogous to the webbed feet of water birds; this membrane gradually disappears, beginning at the extremities of the fingers and toes, and continuing the division up to their insertion. The external parts of generation, the nose, ears, and mouth, appear after the development of the extremities. The insertion of the umbilical cord changes its situation to a certain degree; instead of being nearly at the inferior extremity of the fœtus, as at first, it is now situated higher up, on the anterior surface of the abdomen. The comparative distance between the umbilicus and pubes continues to increase, not only up to the full term of utero-gestation, but even to the age of puberty, from the relative size of the liver becoming smaller. Though the head appears large from the first, and for a long time continues so, yet its contents are tardy in their development, and, until the sixth month, the parietes of the brain are in a great degree membranous or cartilaginous; ossification commences in the base of the cranium, and the bones under the scalp are those in which this process is last completed. The contents of the skull are at first gelatinous, and no distinct traces of the natural structure of the brain can be identified until the close of the second month; even then it requires to have been some time previously immersed in alcohol to harden its texture. There are many parts of it not properly developed until the seventh month. In the medulla spinalis no fibres can be distinguished until the fourth month; it is formed and large, however, long before there is any appearance of brain. The thalami nervorum opticorum, the corpora striata, and tubercula quadrigemina, are seen in the second month. In the third, the lateral and longitudinal sinuses can be traced, and they contain blood. The corpora pyramidalia and olivaria are visible in the fourth month, and from these bodies the brain evidently derives its origin; the pons varolii is not formed until the fourth month. In the fifth we can distinguish the corpus callosum, but the cerebral mass has yet acquired very little solidity, for until the sixth month it is almost semifluid *.

About the end of the third, during the fourth, and beginning of the fifth months, the mother begins to be sensible to the movements of the fœtus. These motions are felt sooner or later, according to the bulk of the child, the size and shape of the pelvis, and the quantity of matter contained in the amnion, the waters being in larger proportionate quantity the younger the fœtus is. The secretion of bile, like that of the fat, seems to begin towards the middle of gestation, and tinges the *meconium*, a mucous secretion of the intestinal tube which had hitherto been colourless, yellow. Shortly after this period the hair begins to grow, and the nails are formed about the sixth or seventh month. A very delicate membrane (*membrana pupillaris*), by which the pupil has hitherto been closed, now ruptures, and the pupil becomes visible.

The kidneys, which at first were composed of numerous glandular lobules, between seventeen and eighteen in number, now unite, and form a separate viscus on each side of the spine. Lastly, the testes, which at first were placed on each side of the lumbar vertebræ, near the origin of the spermatic vessels, now descend along the iliac vessels towards the inguinal rings, directed by a cellular cord which Hunter has called *gubernaculum testis*; they then pass through these openings, carrying before them that portion of the peritoneum which is to form their tunica vaginalis †.

Before quitting this subject, let me enumerate to you the diagnostic marks between a full-grown and premature fœtus. The length of a full-grown fœtus is generally about eighteen or nineteen inches, its weight between six and seven pounds; the different parts are well developed and rounded; the body is generally covered with the vernix caseosa; the nails are horny, and project beyond the tips of the fingers, which is not the case with the toes; the head has attained its proper size and hardness; the ears have the firmness of cartilage; the scrotum is rugous, not peculiarly red, and usually containing the testes. In female children, the nymphæ are generally covered entirely by the labia, the breasts project, and in both sexes frequently contain a milky fluid. As soon as a child is born which has been

* Campbell's System of Midwifery.

† Richerand.

carried the full time, it usually cries loudly, opens its eyes, and moves its arms and legs briskly; it soon passes fæces and urine, and greedily takes the nipple. A child is called premature which is born between the twenty-sixth and thirty-eighth weeks of pregnancy; both its length and weight are under the natural standard; the head seems disproportionately large in comparison to the rest of the body, the cranial bones have not the proper degree of firmness, and the hair is white, and very fine; the limbs are slender, meagre, and flaccid; the skin is red, and covered with a woolly down; it is wrinkled, especially about the face, giving a peculiar aged expression to the countenance; the ears are membranous; the nails are soft, and do not project beyond the points of the fingers; we frequently find that the testes have not yet descended into the scrotum, the nymphæ project between the labia; in both sexes the external parts of generation are remarkably red. A child in this premature state does not cry, but merely whines feebly, shows no desire for the breast, moves little, and sleeps much *.

Thus, gentlemen, in the space of ten lunar months, or forty weeks, from an inappreciable point the fœtus attains a medium length of about eighteen inches, and a medium weight of between six and seven pounds. The remaining observations which I have to offer upon this subject are respecting the fœtal circulation, these I must delay till our next meeting.

LECTURES
ON
FORENSIC MEDICINE,
DELIVERED BY
DR. HAY GRAHAM,
At the Westminster School of Medicine.

LECTURE XII.

Gentlemen,—The next cause of apparent hermaphroditism in the female sex is *prolapsus uteri*, or falling down of the womb: this may be either congenital or adventitious. The history of Marguerite Malaure, related in the *Encyclopedie Méthodique*, is frequently quoted. This woman came to Paris in 1693, dressed as a man; she reported herself as having the organs of both sexes, and capable of exercising a double function. Several medical men were deceived by her appearance, and gave her certificates accordingly. Saviard, an eminent surgeon of the day, carefully examined her, and found she had merely a prolapsus uteri, of which he cured her.

3rd. Malformation, arising from the fusion or reunion of the generative organs of either sex, is illustrated in the case of Hubert Jean Pierre, aged 17 years; he died on the 23rd of October, 1767. At the symphysis pubis there was an oblong body, about four inches long, composed of two *corpora cavernosa*, terminated with an *impervious* gland, and covered with a prepuce, thus resembling a penis; the urethra was replaced by a sort of ligament which extended as far as the *meatus urinarius*. Beneath this oblong body or penis was found a large fissure, formed by two folds of the skin, which closely resembled the *labia*; the left fold, or labium, contained a *testicle* with all its appurtenances, to which was attached a spermatic cord, from whence issued a vas deferens, which, passing through the ring, terminated in a vesicula seminalis, which was filled with *semen masculinum* that on pressure oozed out by a canal opening on the *veru montanum*. The right labium had, in one part, a sac containing a glassful of a limpid liquid, and in another, a body of the shape and colour of a chestnut, somewhat rounded, which was an imperfect uterus, having no communication with the external parts. The large diameter of this uterus was about an inch and a half, and the small diameter about an inch. On the upper part on the right side there was discovered a Fallopian tube, which, with its fimbriated extremity, embraced a well-formed ovarium. On separating the labia, two small, spongy, red, projecting crests were observed, resembling the nymphæ, and which appeared the remains of an urethra laid open longitudinally. Between these crests or nymphæ, and at their upper part, the urethra opened as in females; beneath this there was a very narrow opening, still more contracted by a semilunar membrane resembling a hymen. A small excrescence placed laterally in the upper part had the appearance of a *caruncula myrtiformis*, which contributed still further to give this fissure the resemblance of the opening of the vagina. But on cutting through the membrane, it was readily seen that this apparent vagina was merely a cul-de-sac, a sort of membranous pouch with a smooth surface, and was only an inch in length, and half an inch in width, placed between the rectum and the bladder. Maret, who has given an excellent description of this individual, finishes with the following observations. "The semen masculinum was in vain elaborated in a testicle, since an impervious penis, and the place where this fluid was emitted effectually prevented it from being of the least use in perpetuating the species. A Fallopian tube in vain embraced a well-formed ovarium, since the uterus from whence this tube issued was completely shut in, having no communication whatever from without.

"The appearance of this individual was delicate, the skin was soft and smooth, and there was no appearance of down on his chin or upper lip. The breasts were of a middle size, and each mamma had a large areola. The hips had not that full development usual at his age, but, on the contrary, were narrow; the thighs were not full and round; and in the inferior members there was no deposition

* Naegele Hebammenbuch.

of subcutaneous fat. Thus, in short, Jean Pierre was a woman from the waist upwards, and a man from the waist downwards; and in the centre was a woman on the right side and a man on the left; yet, in point of fact, he was neither one nor the other."

This, gentlemen, is the case which approaches the nearest of all others to a perfect hermaphrodite, and at the same time renders the existence of such beings highly improbable.

There was an individual at Lisbon in 1807, aged 28 years, who, according to the report given, united in a still higher degree of perfection the attributes of generation of either sex. She was tall, with a manly countenance and dark complexion, with a little beard; but her voice, the conformation of the larynx, and her manners, resembled those of a woman. The penis, testicle, and scrotum, had the relative situation, size, and shape, as in an adult male. The penis was capable of erection, and the gland was entirely covered by a prepuce, also erectile: it was penetrated by the urethra a third of its length. The female organs of generation resembled those of a well-formed woman, except that the labia were smaller and nearer the urethra than usual; the thighs were not so plump as with the generality of women; the bones of the ilia were small and near each other. She menstruated regularly every month. During coitus, the penis became erected. She was twice pregnant, but miscarried at the third and at the fifth month. It is evident this individual belonged to the female sex. She had all the sexual parts, menstruated regularly, and was twice impregnated; besides, the penis, of which the canal of the urethra was imperfect, was incapable of performing any function; neither does it appear that she had any desire for the female sex, but had the voice, the manners, and the passions of a woman.

4th. We will now give a case in illustration of the fourth or last species of hermaphroditism, in which there is an entire absence of those organs essential towards generation. Marie Derrier, aged 23 years, had a sort of impervious penis, near the root of which there was a frænum, which, descending on each side as far as the perinæum, terminated in two loose, flabby, wrinkled folds of skin. There were not any nymphæ to be seen, no appearance of a vagina, no testicles, beard, or bosom; the urine issued by a particular kind of opening; the voice was feeble and effeminate, the structure of the body small and weak. Hufeland and Mursinna pronounced this individual a girl; Stark and Marteus, on the contrary, considered it a boy.

Thus, gentlemen, you perceive how difficult it is in some cases to distinguish the sex, and the most skilful physicians are often of opposite opinions. In the consideration of hermaphroditism we should ever keep in view those external appearances of the body which invariably accompany, to a greater or less degree, the malformation of the organs of generation. Thus in the external appearance of a male hermaphrodite, the more the appearance, the voice, the manners, habits, and inclinations approach those of the female sex, the more ought we to be inclined to suspect that the testicles are either altogether wanting, or otherwise in a state of atrophy. On the other hand, in respect to a female hermaphrodite, the more these appearances approach the male sex the more ought we to be inclined to suspect either the absence or the inactivity of the *ovaries*. This rule is without exception, only we must take care not to allow ourselves to be deceived by those propensities in the exercise of the organs which may arise from a depraved and vitiated appetite.

The causes of hermaphroditism must be sought for in the development of the *germ*, which by some is supposed to be without sex, and that each germ may therefore become male or female, according to the circumstances attending impregnation, with which we are unacquainted, such perhaps as the condition of the parents, of their organs of generation, of the germs, and of the spermatic animalcule. Be this as it may, there are certainly several points of resemblance between the male and the female, which tend to support such a hypothesis.

1st. The testicles and the ovaries are originally formed, the one as well as the other, in the same place, and it is only towards the eighth month of conception in the human fœtus that the testicles quit the spot they had hitherto occupied.

2ndly. The extreme large size of the clitoris in a fœtus under four months, seems to proceed from a primitive disposition of the germ, when the *clitoris* might easily have become a *penis*, according to the influence which impregnation might have exercised upon it.

3rdly. We observe that in male animals, where the females have the mammæ placed along the abdomen, the nipples are similarly placed, also in men their situation corresponds with the woman. That which in the germ becomes the scrotum of a man, might easily become the labia pudendi of a woman, and the prepuce of a man, the nymphæ of a woman, *et sic de cæteris*.

4thly. It is further observed by Sir Everard Home, that cases of hermaphroditism in inferior animals generally take place only when there are twins of different sexes, an observation he made on calves, and that one is regularly formed. From whence it would appear, that impregnation, acting at the same time on two germs, produces in each of them a different sex. The act becoming thus complicated, nature is unable to contend with the difficulty, since twins are almost always of the same sex. Or, perhaps, it may happen that the germ becomes fecundated by two spermatic animalcules, one of which would produce a male and the other a female. But to attempt to solve the arcana of nature must ever prove a fruitless speculation.

Hermaphroditism in the lowest scale of animal life is of two kinds, either such as when the animal can reproduce its species without the concurrence of another individual, which takes place amongst the bivalve tribes, as muscles, oysters, and such like, or when the concurrence of two individuals is necessary towards their mutual impregnation, as with snails and all the univalve tribes. This is wisely ordered by nature, for the one are fixtures, and remain for life attached to the rocks where they are produced, whilst the others are possessed of locomotion, and can therefore approach each other.

Hermaphroditism prevails throughout the greatest part of the vegetable kingdom, and hence we find it only common to those animals which approach the nearest to vegetable life. This facility of reproduction may be attributed to an all-wise Providence; since these inferior animals principally serve as food for those of a higher class, there is necessarily an enormous expenditure of life. As we ascend in the scale of animals, this reunion of the functions of either sex is of extremely rare occurrence, so as perhaps never to have been met with in a perfect state.

If we adopt the opinion received amongst many physiologists, namely, that the female is the primitive or embryotic sex, the theory of Geoffroy St. Hilaire seems well adapted to explain this aberration from the usual laws of nature, from the nidus formations being too feeble to produce the perfect evolution of the male organs of generation. Thus the raphe not being closed, as in hare-lip, there remains a cul-de-sac, more or less resembling the vulva; the ovaries remaining in a state of embryotic atrophy, or not being developed into testicles, there is no marked character of sex; thus the clitoris forms an imperfect penis, and the urethra opens into the perinæum.

The following rules may be laid down as applicable to every case of doubtful sex, so as to avoid the errors which the difficulties of the case might lead to. 1st. The examination of the external parts of the organs of generation should be made with the greatest care and precision. A probe or sound should be introduced into the openings, so as to ascertain their extent and direction; this should be done with causing as little pain as possible, and without wounding or injuring the parts. 2nd. The general appearance of the body should be observed, so as to compare the relative proportions of the different parts, and to note all those characters which are peculiar to either sex. 3rd. For this end we should further observe the tastes, inclinations, or propensities of the individual, at the same time taking care not to confound those habits which proceed from education, or from a depraved taste, with those innate propensities which arise from the physical wants of the organisation. 4th. In doubtful cases it is of the greatest importance to ascertain whether there is any opening in those parts, or in any other, through which menstruation takes place, as this would at once decide the sex. 5th. It is a frequent source of error to attempt to decide, shortly after birth, the sex of a child, whose genital organs are not regularly formed. In such a case of doubt, we ought to suspend our judgment, either until a further development takes place, or until the period of puberty has arrived. 6th. We should admit with much caution and reserve the declarations of the hermaphrodite, or of those connected therewith, especially should there be any reason to suspect them having interested motives.

In respect to their being "*habiles ad procreandos liberos*," or capable of begetting children, and, therefore, of contracting marriage, we should be cautious how we deliver a negative judgment, or how we deny that an apparent hermaphrodite of the male sex, who may have a malformation of the penis, but nevertheless secrete the *semen masculinum*, is capable of impregnating a female, whilst at the same time we ought not to admit this capability in one that is neuter, where there is the absence of every mark of sex. In such cases every thing must depend on the degree or extent of the malconformation.

In apparent hermaphrodites of the male sex, we cannot take on ourselves to deny the existence of the fecundating faculty, notwithstanding the external absence of the testicles, or the division of the scrotum into two lobes resembling the labia pudendi, or the shortness and defective conformation of the penis, so long as it is not united to the scrotum throughout its entire length, but is capable of erection, and can be introduced *infra labia*, however short may be the distance, so long as the semen can be emitted into the *vagina*, and that the semen is properly elaborated and excreted. This last important circumstance is not only established by the fact of emission, but also by those general appearances which characterise the individual as belonging to the male sex, as the enlargement of the glottis, the manly tone of voice, the beard, the make of the body, and such like circumstances. In respect to the *emissio seminis*, the observations we made when treating of impotency, relative to hypospadias, are applicable to the present case.

The capability of procreation in the female does not reside simply in exercising the coitus, but also in conception, gestation, and delivery. Thus, in a case of apparent hermaphroditism in a woman, it is the duty of the medical man to examine anatomically and physiologically if the external parts of generation are so constituted as to allow of the introduction of the penis; if the vagina, or any other corresponding passage, opens into the uterus; if there is any menstrual discharge; and if the parts, as well as the structure of the pelvis, will admit of the development and expulsion of the fœtus at the full period; also if the general habits and appearance of the individual incline more to the female than to the male sex. The ex-

cessive growth of the clitoris does not constitute, according to the opinions of some, an absolute barrier to coitus, and in any case such an obstacle is easily remedied by excision. But it is not so with an old irreducible prolapsus uteri, simulating hermaphroditism, notwithstanding there is a rare case of exception to the contrary related by Hufeland, where a woman labouring under this disease became impregnated, and bore a child to the full period.

In respect to neuter hermaphrodites, either with absence of sex, or with an intermingling of sexual organs, in neither case are they capable of procreation; the one from the want of sex, the others from having the attributes of both sexes, but so imperfectly formed, as to be totally useless to every purpose, whether of fecundation or of conception.

CLINICAL LECTURES ON SURGERY,

DELIVERED AT

THE HOTEL DIEU, PARIS,

BY BARON DUPUYTREN,

PRINCIPAL SURGEON OF THAT HOSPITAL.

Corrected by himself.

(Continued from page 367.)

Wounds of the Abdomen—Of the Pelvis—The Contents of the Cavity—Wounds of the Inferior Extremities—A Comminutive Fracture of the Thigh Bone—Structure of the Femur—Of the Tibia—Treatment of Gun-Shot Wounds and their Complications, &c. &c.

Gentlemen,—In to-day's lecture I shall continue with wounds of the abdomen, which are equally serious, though perhaps not so directly fatal as the preceding (wounds of the chest). Wounds of this portion of the body are of frequent occurrence, both in consequence of the great extent of region and of the softness of its parietes, which oppose but slight resistance to the passage of projectiles. Their danger depends principally on lesion of the internal organs, and of the after consequences of this lesion. Immediate inflammation results from a wound of the liver, spleen, or large intestine; consecutive inflammation of the peritoneum, and of all its divisions, rapidly come on from the effusion of bile, fæcal matter, or stercoraceous gas, from gastric mucosities in cases of perforation of the bladder, stomach, or in fact any portion of the alimentary canal. Again; internal hæmorrhages arise from wounds of vessels, &c.

Many of the effects from gun-shot wounds, as I have already alluded to in speaking of wounds of the chest, are met with in this region. For example; the different abdominal organs may present all the phenomena of contusion in its different degrees, and even attrition, without there existing any apparent lesion of the walls which protect them. A French soldier was wounded in 1814 under the walls of Paris; a cannon ball struck obliquely his left flank without producing any external wound. He was immediately carried to an itinerant hospital established at Villette. He was at the same time sneered at by his companions, who, not observing the least wound, believed that it was a mere pretence to leave the field of battle. On my examining the part where he was struck, I found it of a violet hue; there was fluctuation, and for a great depth and extent there was much disorganisation. He was now transferred to the Hôtel Dieu. On my visiting him in the evening I found that his skin already had become of a brownish hue, there were immobility and insensibility of the left inferior extremity; vomiting; discharge of blood with urine; difficult and painful respiration; and the greatest general stupor. In spite of every thing that was done for him in the course of a few days he died. On the autopsy we found the subcutaneous cellular tissue, the sacro-lumbar muscular mass, the walls of the abdomen, and the left kidney in a complete pulp, the lumbar nerves were torn, the transverse processes of the lumbar vertebræ and the last ribs reduced to powder; the abdominal cavity, and also the wounded side of the thoracic cavity, filled with black blood: the skin only resisted the action of the bullet.

But projectiles of a bruising nature may determine a similar affection without breaking the skin, though in the greater number of cases they disorganise it, with the parts that it protects. Then these phenomena are produced according to the volume of the projectile, its quickness, and the manner in which it has struck the parts. In a word, the symptoms produced may present all the characters that I have described in speaking of contused wounds.

A bullet striking obliquely the anterior wall of the abdomen, under particular circumstances, may *rupture* the organs contained within this cavity. It is very difficult to conceive how such a supple, flexible, and mobile viscus, as the alimentary canal, can become broken from an external shock, without there being any division, or alteration, in the walls of the abdomen. Nevertheless examples of this kind of wound are too numerous to place it in the least doubt. Whatever may be the mechanism of its operation it is worthy of remark, that ruptures of the intestinal canal are not always followed with effusion of stercoraceous matter into the peritoneal cavity, and often the wounded get well by means of adhesions, which are established between the torn and neighbouring parts.

Stupor, a remarkable effect from extensive wounds, and of which I have already given a description, is particularly marked in those of the abdominal cavity. The patient we observe in a little time to become of a yellowish tint, to lie in a complete state of immobility,

and to be quite insensible to every thing passing around him.

I will next consider wounds of the organs within the cavity of the pelvis. This osseous cavity, which is a kind of an appendix to the abdomen, contains many important organs, and the wounds that we observe in it are of a very serious nature. When a projectile traverses this region, it fractures the bones, which in itself is a very formidable accident, for the bones are surrounded with a mass of soft parts, together with a considerable number of vessels and nerves. The organs thus situated are perforated, they discharge their contents within the cavity, from which there results consecutive inflammation, which is, in most cases, inevitably fatal. Large vessels become wounded, the hæmorrhage cannot be checked; there is also a lesion of the nerves, giving rise to paralysis of one or many of the organs, such as the rectum, bladder, &c., or inferior extremities. If the ball lodges in the thickness of the bone, or soft parts, all the phenomena take place as I have before named, when speaking of other regions, viz. necrosis, inflammation of the periosteum, and of the different organs contained in the cavity, formation of large abscesses, fistulous openings, &c. Perforation of the bladder is followed with effusion of urine, that of the rectum, with the contents of that organ, the effects of which are soon known from the speedy termination of the existence of the patient. There are, however, some cases which are singular exceptions: an harbinger of the Royal Guard, treated in 1830 at the Hôtel Dieu, survived nearly forty days after a double lesion of the bladder and large intestine.

Wounds of the Inferior Extremities.—The volume of the articulation of the hip-joint, its proximity to the trunk, the numerous organs which enter into its formation, render wounds of this part extremely dangerous. Amputation, which is often necessary for the diseases with which it is attacked, presents one of the most frightful mutilations which we can observe. In the operation, some large vessels, and also some of the greatest nerves in the body are divided; yet we have many proofs of the efficacy of this dreadful operation.

Fracture of the *thigh-bone* presents always more or less danger. The femur being of very compact structure, if the projectile has much power, the bone is broken in a number of fragments; consequently there results a comminutive fracture, which is much more dangerous when the integuments are wounded. There is not an example on record, I believe, of non-comminutive fracture produced by a ball which has struck perpendicularly the body of the bone. The fracture is simple only when the ball has struck in somewhat an oblique manner; but the moment a person is thus wounded he falls. In this fall the extremities of the broken bone are violently carried against the surrounding tissues, and lacerate them. Every movement gives rise to fresh lacerations, accompanied with the most excruciating pain. From all these circumstances it results that the inflammatory symptoms take on an excessive action, the suppuration becomes abundant and of an unhealthy character, the health of the wounded becomes in an extreme state of debility, and death is almost inevitably the result. Amputation is then in the greater number of cases the only means of preventing such a disastrous occurrence. The state of the soft parts, the lesion of the principal arteries and nerves, are symptoms for hastening this operation. It is essential that amputation should be immediately performed to prevent the development of consecutive symptoms.

If the leg be fractured, the danger varies according to the point of fracture and to the extent of lesion. At the superior part the tibia presents a large volume, it is spongy, and a ball may easily traverse it without producing fracture; it forms in it then a hole of greater or less depth, as has been frequently observed when the ball has been enveloped in the stocking of the wounded. In cases of this kind a cure may be easily obtained. If the ball strikes in a direct manner the middle surface of the bone, it may also leave a hole, the size of which is proportioned to the projectile, and even perforate it in many parts without fracturing it completely. The portions of the bone now not being of sufficient strength to support the weight of the body, the bone consequently becomes completely fractured. Such cases happened at the attack on the Hôtel de Ville, and were perfectly cured.

But most frequently, and particularly in the middle portion of the bone, it is broken into fragments similar to the femur, where it is of equal durity with this latter bone. The splinters are then numerous, and should be extracted, so as to lessen the consecutive symptoms. At the Place de Grève, on the 28th of July, a compositor had his leg broken. He was gifted with a very irritable constitution; he had great difficulty in overpowering the nervous symptoms with which he was attacked in the first place, and amputation could not be practised as the case required. In a short time afterwards peculiar symptoms supervened, which were much increased by the ardent imagination of the patient. A few febrile accessions carried him off on the 31st of August.

When a ball has traversed the *knee*, the articulation opened, and the osseous surfaces altered, the case requires immediate amputation. If there is an established fact in military surgery, it is the incurability of wounds of this nature.

Wounds of the *inferior portion of the leg*, particularly those of the articulation, are frequently of sufficient danger to require also amputation. As to wounds of the *foot*, they give rise to precisely the same phenomena as wounds of the hand, which I have already so fully spoken of, that it will be useless for me to enter into any further detail.

I will now recapitulate in a few words the principal points relative to wounds of the limbs.

1st. Wounds which interest only the soft parts, and have not lacerated the large vessels, present but slight danger, and their cure is speedy and simple.

2nd. There is always more or less danger when the bones are also affected; but fracture of the principal bone of the limb so much increases the danger of the case, that we can scarcely reckon on a fourth of cures, and this for two reasons; in the first place, because the fracture is in most cases accompanied with a wound, and, in the second, because it is nearly always comminutive. Every surgeon is aware that complicated fractures with wounds, whatever might have been the cause which has produced them, are of such a nature as in many cases to require amputation; the contact of air, inflammation, excessive suppuration, even gangrene, which are the consequences, determine the most unhappy symptoms.

3rdly. If a bone is struck, and fractured in an articulation or in its neighbourhood, if the articulation be opened, the wound presents one of the greatest danger, and the symptoms that result from it nearly always require amputation.

4thly. When large vessels are wounded, if the hæmorrhage is not speedily arrested, the patient necessarily perishes. This is one of the most frequent causes of death on the field of battle. Division of veins scarcely ever gives rise to hæmorrhage, unless the large trunks are attacked, or the patient makes use of improper exercise.

It would be superfluous to speak here of the consequences of the destruction of muscles, of tendons, lesions of nerves, &c. They are observed daily in common practice, and every surgeon comprehends them.

Treatment of gun-shot wounds and their complications.—The treatment of these wounds, like every other affection which occupies the attention of the surgeon, is divided into general and local. The first comprehends repose, both of body and mind, different degrees of diet, pure atmosphere, and sanguineous depletions, &c. The object of the second is to arrest hæmorrhage, to prevent or destroy strangulation, inflammation, gangrene, the extraction of foreign bodies, amputation, ligature, the position of the limbs, topical applications. We might say, in a general manner, the same as we distinguish three principal times in wounds, one of stupor or numbness, the second of reaction or inflammation, and the third of suppuration and exhaustion; the treatment should also be successively composed of slight stimulants, afterwards of antiphlogistics, and, lastly, of tonics and nutriments.

Repose, especially if there is a fracture, is of the first necessity. We conceive this scarcely possible in an active campaign, when the presence of the enemy and the considerable number of wounded are in a continual state of motion. Nevertheless the itinerant hospitals, though submitted to all the chances of the battle, are for this purpose of the greatest utility.

Calmness of mind is not less essential. I have already, in the course of my lectures, told you of the effects of the mind over wounds, &c. We must then endeavour to keep concealed from the patients every thing that would cause inquietude, melancholy, grief, or immoderate joy, all in fact that would cause disagreeable sensations.

Pure atmosphere is a very important condition; consequently we ought to pick out the most salubrious places, the wards should be kept in the greatest state of cleanliness, all encumbrances should be avoided, also all disagreeable emanations. The wounded should, if possible, be placed in large tents, rather than in hospitals, where gangrene, ataxic and adynamic fevers frequently break out, and propagate themselves with violence. The renewal of air should be submitted to the greatest caution, to prevent the unhappy symptoms which otherwise might be the consequence. The ventilators usually made in hospitals determine phlegmasiæ of the internal organs, and are the cause of a number of deaths. It is to the action of these atmospheric currents, the impression that the sudden change of the heat of the day and the freshness of the evening air occasion, that is frequently owing, as I have before named, the invasion of tetanus. For the same motives, we should watch patients with care, and see that they did not expose themselves, by disembarassing a portion of their bed-clothes, and thus render themselves liable to the same dreadful affection. Many of the wounded in the Hôtel Dieu, in 1830, died from this imprudence, and in spite of the most urgent solicitations we could not make them sufficiently careful.

Diet is a part of treatment to which it is necessary to give much consideration. The sudden change from health to disease, the certain invasion of fever, the trouble of internal functions, and many other considerations, render diet quite indispensable. Absolute diet to individuals who are not gradually prepared, has great inconveni nces. It is necessary to recollect the power of the patient, and give to him by degrees broths, fresh liqueurs, &c.; you must reduce, suspend altogether, or increase, the nourishment according to the case, and according to the period of the disease; it is of the greatest importance to pay attention to the customary habits of the patient, to the age and constitution. A Russian in a state of disease would eat with impunity more than a Spaniard in health. In 1814, the wounded Cossacks received, at the Hôtel Dieu, rations which would have been sufficient for our soldiers in the best of health; besides this allowance we gave them brandy, which did not appear to have any unhappy influence on those most seriously wounded.

The *beverages* should vary according to the period of the wound. In the first stage they should be slightly exciting, contrary when inflammation has supervened, and tonic during the period of suppuration. We should at the same time watch with care the evacuations, and prevent their suspension, as the efforts even of endeavouring to make water or go to stool may produce hæmorrhage.

Observation has shown us, that in the three succeeding days of the wound there is generally developed a *fever*, of greater or less intensity, and to which the name *traumatic* has been given. This sometimes becomes so violent, that the surgeon should never neglect the means of preventing or moderating it. The nature of this fever is manifestly inflammation. After diet, repose, and beverage, *bleeding* is the most certain means of lessening it. It may be established as a general principle, that all patients struck with balls or other projectiles should be bled, and that, too, copiously, of course taking into consideration the state of the wounded person. If there was stupor, it is evident that by opening a vein you would kill him; in such cases then it is necessary to wait till the powers of life to a certain extent have returned. If a very profuse hæmorrhage has taken place, of course there is then no necessity for it. But in all other cases it is necessary to be on your guard against inflammatory symptoms, and general bleeding is the best means of checking it.

Wounds connected with important organs, such as the lungs, brain, liver, &c., require large and frequent bleedings. Ancient practitioners did not fail to perform this ten, fifteen, or twenty times on the first days in wounds of a like nature, and they obtained success in cases that we should despair of. These traditions have been followed in some cases of serious wounds penetrating the chest, and have been attended with the greatest success. Experience has put an end to the absurd practice of suction, in giving issue to the effused blood in the chest, and proved that the cure is much more uncertain, than when with a proper apparatus it is immediately closed, and the introduction of the air into the foreign cavity is prevented as much as possible.

I next come to consider one of the most difficult and complex questions in military surgery, that which concerns *amputation*. The first problem to resolve in wounds of the limbs is to determine what are the cases which require amputation; for when this operation is thought indispensable, it is necessary to have recourse to it without delay, at least if there is not present any considerable stupor or commotion. What are then the circumstances which render it necessary? At what space, and in what way should it be practised? After the operation is it necessary to have recourse to immediate re-union or not? I have already made known to you, in the course of these lectures, cases in which this operation has not been performed, and, in fact, which, according to the principles of our art, not the least hope had been entertained without it of a cure, and they have got well. We must, however, admit that in some cases there is an absolute necessity for it.

Amputation is necessary, 1st, when a bullet is nearly spent, and strikes obliquely a limb, splinters the bone, and for a great extent contuses the soft parts, without, however, breaking the skin. You must be now aware of the danger of a lesion of this nature; this will be sufficient for my proposition, without re-entering on the subject here. Amputation sets aside the danger of annihilation, which succeeds the stupor, and prepares the mortification of the soft parts. 2nd. All wounds made by projectiles, from which a limb has been much mutilated, entirely destroyed, or held only by a feeble flap of integument, require amputation. We have otherwise an unequal torn wound, parts struck with mortification, a prominence of bone, in a word, an enormous wound, the excessive suppuration of which takes away all power from the patient, and thus destroys him, or which, in cases the most fortunate, gets well only after long and tedious treatment, and by a deformed cicatrix. In spite of all these advantages, the rule is not without exceptions. For example, if a bullet carries away the arm, near the articulation of the shoulder-joint, or even at this articulation, if at the same time it breaks off the acromion or coracoid process, the spine of the scapula, we may conceive amputation to be impracticable; for at the expence of what parts could it take place? In the same way, suppose the thigh carried away near the coxo-femoral articulation, or at the articulation, it could not be performed. What then in such cases can be done? To cleanse the wound from all foreign bodies, and cut away every portion of prominent bone; if there is hæmorrhage it must be checked, and if not at the time of the accident, it must be narrowly watched, for in all probability at a later period it will supervene. The most prudent method would be at once to tie the arterial trunk, about an inch or an inch and a half above the wounded point of the vessel. But these precautions will not disperse the great danger which accompanies these wounds. This danger is owing, first, to the commotion, secondly, to the strength of the patient not being able to support the violence of the inflammation, and the abundanc of suppuration from so vast a wound, when even it has been rendered smooth, and all the foreign matter extracted from it; thirdly, if the wounded should have outlived all these dangers, cicatrisation cannot take place, for the latter, so extremely difficult after a regular and ordinary amputation, presents frequently insurmountable difficulties in wounds produced by projectiles; fourthly, and finally, he becomes threatened with the development of internal inflammation, and this result is neither less frequent nor less formidable.

3rd. Most authors regard amputation as

indispensable when there is laceration, or division of large vessels. I cannot myself adopt such a decisive opinion. If, for example, the projectile has struck the middle and internal part of the thigh, and opened the femoral artery, I should endeavour to save the limb, by tying the artery above the point of laceration. In such cases one ligature may suffice, but it is most prudent to apply two. Compression should be made on the crural artery, and the incision should be carried to the middle part of the wound, then first the superior, and afterwards the inferior, extremities of the artery should be tied. By this means I have obtained numerous cases of success in subjects suffering from comminutive fracture, not complicated with the wound. In a case of fracture with aneurism of the anterior tibial artery, a ligature around the femoral artery proved successful. But if the lesion of the artery is accompanied with a wound, the case is more serious. Then if there was simply a lesion of the artery, I should recommend the application of a ligature, or even if it took place with a simple fracture of the bone; but if there was great lesion of the bone, with external wound, then amputation would be necessary, and if added to this there was a lesion of the artery, there would then be a still greater reason for amputation.

Reviews.

An Inquiry into the Nature and Properties of the Blood in Health and Disease. By the late Charles Turner Thackrah. A new and enlarged Edition, arranged and revised by Thomas G. Wright, M.D. To which is prefixed a Biographical Memoir of Mr. Thackrah. Pp. 246. October, 1834. Longman and Co.

Mr. Thackrah's work on the Blood, published 15 years ago, was, undoubtedly, the best extant. It was the result of a prize offered by Sir A. Cooper to the pupils educated at Guy's Hospital, for the best Dissertation on the Blood, for which Mr. Thackrah was the successful competitor. The lucid manner in which the subject was treated, the ingenuity evinced in prosecuting the experimental department, and the fairness with which *appearances* were stated, whether in support of the principles intended to be supported, or in militation of them, acquired for the author at once the reputation of a physiologist. The doctrine of Hewson, "that the disposition of the blood to coagulate is increased as the animal becomes weaker," was fully substantiated by the present author's inquiry. The position had been denied by many eminent individuals, amongst whom we need only mention the name of Hey. Mr. Thackrah, from numberless and repeated experiments, inferred the following:

"From these statements, then, it appears, that in the dog, sheep, horse, and hog, *the blood concretes slowly in regular proportion to the tonic state, or that of the system in which the vital powers are strongest;* blood received immediately before the death of the animal first assumes this change; next, that which is taken at the middle period; and, lastly, that which is received on the first effusion from the wound."

The same relations of the coagulating period were observed in the human subject, both in health and disease. The cause of the fluidity of the blood, and of its coagulation, is a subject still involved in much obscurity. Mr. Thackrah canvasses various opinions which at different periods have been entertained; such as the attributing fluidity to "motion," coagulation to "the air," to "rest," &c.; and, after adducing a number of experiments and illustrations, concludes that—

"Since fact and experiment so strongly militate against the supposition of either *air* or *rest*, simply considered, effecting the blood's coagulation, we now examine the opinion that *the nervous influence is the source of the blood's fluidity, and its loss the cause of coagulation.*"—p. 80.

Now for the grand proofs:—

"Blood confined in a vessel, which from time to time vitality could not have deserted, did not coagulate in an hour; while that inclosed in a lifeless vein was firmly concreted in one fourth of that period."

Mr. Thackrah confesses the difficulty he would have in determining the reciprocal action of the blood and its vessels on each other, and also how to analyse the principle of life. It is well he did not attempt the task, for he would assuredly have failed. The essence of life is far beyond human grasp; it eludes all our senses, and mocks at reflection. Even an attempt to arrange methodically its laws would have required a more comprehensive mind even than that of a Hunter or a Bichat; nay, would have brought into full exertion the all-powerful genius of him who unfolded to us the great laws of the universe to have arrived but at a conjecture. Mr. Thackrah's mind was not of so lofty a grade; he dwelt among facts and experiments, and never deduced, nor attempted, any leading principle in physiology. He was deficient in the requisite knowledge, namely, of comparative anatomy, chemistry, vegetable physiology, and natural philosophy. He was an unwearied and acute observer of diseases, and a collector of facts: this was his *forte*. It is probable he never could have invented the steam-engine, nor have brought electricity from the clouds. His mind was not an inventive one.

The author had a difficulty in admitting the vitality of the blood, but could not disprove it. At page 92 he gives a *resumé* of the results of his inquiries on this topic: he says—

"There is a perplexity in this subject. 1st. Blood does not concrete in a living vessel. 2nd. Blood does concrete when that vessel is deprived of life, or when extravasated. 3rd. The concretion of extravasated blood is re-

tarded by galvanism; hence we infer, that fluidity is maintained by the living power of the vessel. Further; 4th. Blood concretes soonest when the animal from which it is taken has been greatly reduced—when its vitality is least. This supports the doctrine; but 5thly, though blood taken at a low degree of vitality concretes quickly, it does not separate its serum so rapidly or so perfectly as blood drawn when vitality is unimpaired. Hence the absence or diminution of vital power gives the disposition to concretion, or, in other words, to the commencement of coagulation, but tends to prevent the completion of the process."

Mr. Thackrah next puts a question more difficult to answer than the grave-digger's in Shakspeare of—"How long will a man lie in the earth ere he rot?" It is an unanswerable question—"Is coagulation a vital or chemical action?" We might as well inquire — do brutes possess the reasoning faculty? Different answers would be returned.—Show us the difference between chemical and vital action—a clear and defined boundary, and we will answer the question. The author has left it unanswered, but inclines to refer *coagulation* to *vitality*. We observe the same kind of experiments, the same results, and the same mode of reasoning, employed on the two topics we have noticed in this, as appeared in the first edition.

The next chapter we come to is on "Blood from different Vessels of the same Order." Mr. Thackrah believes that the blood is not uniform in its composition, but varies in almost every vessel in the body. "The current," he says, "of circulation is like the stream of human life, incessantly pursuing its round, but as incessantly changing its elements." On the portal blood some interesting results are detailed; we shall, therefore, make no apology for giving a long quotation. The following are the "principal inferences:"

"1st. That blood from the vena portæ has the appearance of defective elaboration, and that its colour is darker and more inclined to brown than to the modena. 2nd, That portal blood concretes much more quickly than blood from other veins. 3rd. That it contains a considerably larger proportion of serum. 4th. That the serum of portal blood, from the detention of colouring matter, is redder than serum carefully separated from the blood of other vessels; and that, from the same cause, it has higher specific gravity, and yields on exsiccation a greater weight of solid matter. 5th. That portal serum, on the application of heat, concretes more quickly but less completely than jugular. 6th. That the crassamentum of portal blood does not expel its serum as fully as blood from other vessels, but remains a soft mass, unless artificial means be employed. 7th. That portal crassamentum contains a considerably smaller quantity of fibrine. 8th. That portal blood, in general, contains a much less proportion of albumen and hæmatosine than jugular."

In the margin we have the author's explanation of the causes of the difference in the characters of portal blood.

"The less elaborated and more liquid state of portal blood tends to show a source of supply not generally supposed. If this blood be less rich, we can refer the difference only to the admixture of a diluent. And where can the fluid be derived? Only, I conceive, from those surfaces on which we find the ramifying origins of the vein; the alimentary canal, and the stomach in particular, present a source of supply. Much of the liquid we drink is taken up, I conceive, by vessels which open directly into the radicles of the vena portæ, and thus enter the circulation without passing through the route of the lacteals."

This is a feasible solution, but it is referring many changes to but one cause, where a thousand others may be in operation. We may instance the detention of the blood in its circuitous and tortuous route through the abdominal arteries and meseraic veins; the chemical alterations the blood may undergo in its circulation through the viscera; the elements which may be abstracted from it for the purpose of elaborating the various secretory fluids;—but this is not the place for us to write an essay on the portal blood.

We come next to a more interesting, because a more useful, part of the work, and one with which the mind of the author was more able to compete—the "Effects of States of the Animal System on the Blood." Temperature exerts an influence—cold darkens its colour—heat renders it lighter. A temperature of 50°, according to Vines, produces the buff-coat in an ass; below 35° or above 60° the buff is removed. Blood is in greater quantity in the young, is of a lighter hue, and coagulates more quickly than in the aged. In the meridian of life hæmatosine and albumen are in greater abundance; and the author asks, are they "a provision for the greater exertions, physical and mental, of this period?" "He has generally found more water and less fibrine in the blood of females than in that of males." The milky appearance so frequently observed in the blood after a meal, and occasionally in disease, the author imagines is chyle mixed with serum "not yet elaborated into blood." He controverts the opinion, that labourers have more fibrine in the blood than the debilitated; he thence *reverses* the position.

The observations on "Blood in Disease" possess a high value. They occupy about sixty pages of the work; better it would have been had they occupied more. The substance of them, however, with but a few exceptions, is summed up in a few pages. There is one practical precept, in a note at page 210, well worthy of attention.

"Though unconnected with my subject, I beg to observe, that the distinctions between pleurisy and pneumonia are, *in a majority of cases*, neither practical nor useful, and that, where they are, considerable bronchitis rarely

fails to accompany them. Pleurisy *sometimes*, indeed, exists alone, and produces extensive effects, without disease of the lung or air tube; but I doubt the existence of pneumonia without pleuritis, and of extensive pulmonic inflammation without bronchitis. Auscultation gives no diagnostic mark of the early stage of pleurisy; nor does practice, I think, require a distinction between this disease and pneumonia," &c.

One of the most celebrated authors, in his immortal work on the Chest*, has the following remark at page 183. "Nothing is more common than to find pneumonia altogether simple, or complicated only with so slight a degree of pleurisy, as in no respect to add to its danger or modify its progress." Again, at page 392 of the same work we meet with a similar opinion:—"It is, no doubt, true, that pleurisy and pneumonia are very frequently combined; that, in cases where the pleura alone is inflamed, the stitch of the side, which constitutes the principal character of the Πλεύριτις (*pleuritis*) of the ancients, and also of many moderns, is scarcely perceptible, or only momentary, and in certain cases is altogether wanting; and, on the other hand, that in cases where a violent pneumonia is complicated with a very slight pleurisy, there is sometimes a most violent pain of the side; at the same time, it is equally certain that one of these inflammations may exist without the other." The difference between the two authors is therefore but in degree—in the relative frequency with which the two structures are involved, simultaneously, in disease.

Many of the experiments in this work deserve a repetition, especially those which were performed for the object of detecting the cause of the blood's coagulation. Had Mr. Thackrah lived a few years longer, he would no doubt have made the work more complete, particularly in extending the practical portion of it. Nevertheless, it possesses real intrinsic merit; it is the result of long and laborious investigation by a man of sterling talent—by a man whose mind was ever searching after truth, and panting for renown. Every medical man who has an interest in his profession will undoubtedly peruse Mr. Thackrah's work on the Blood.

We cannot quit this review without noticing that Mr. Thackrah's work on Arts and Trades is quite equal to the present; it abounds in facts, and judicious and most useful suggestions; and embodies that species of information which every practitioner would find useful and important. With the exception of Ramazzini's, it is the only treatise on the subject; yet it is unquestionably of more value to the English student.

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* Laennec on the Chest, &c. By Forbes. 4th Edition.

Anatomical Descriptions of the Parts concerned in Inguinal and Femoral Hernia. Translated from the French of M. Jules Cloquet. With lithographic plates from the original etchings, and a few additional explanatory notes. By A. M. M'Whinnie, Assistant Teacher of Practical Anatomy at the Bath Hospital. pp. 48. 1835. Highley.

The anatomy of the parts connected with inguinal and femoral hernia has only within the last few years been fully investigated, and the application of this knowledge been made to the reduction of a hernial tumour by the "taxis," or for dividing the stricture when the tumour is strangulated.

In oblique inguinal hernia, the stricture may exist in three distinct parts,—at the external ring, at the internal ring, and, according to Sir Astley Cooper, where the conjoined tendons of the internal oblique and transversalis muscles cross the inguinal canal. We can readily comprehend how the dense and almost inelastic boundaries of the external ring can afford a powerful resistance to the return of a large tumour into the abdomen, as well as mechanically to compress it so as to interrupt the circulation of blood, and thus produce gangrene, &c., but we have more difficulty in comprehending how the internal ring can produce a similar kind of obstruction: we doubt the position on account of the negative properties, the loose and almost unresisting boundaries of the opening in the fascia transversalis. It exhibits a striking contrast with the external ring, the inner border *only* of the former being tense. With respect then to the third seat of stricture, Sir A. Cooper describes the "conjoined tendons" as crossing the spermatic cord in front, at the upper part of the inguinal canal, and, after they have arrived at its inner side, as winding behind the inferior part. Mr. Guthrie describes the spermatic cord as passing through a slit in the fibres at the inferior part of the transversalis, so that some fibres will be in front of and others behind the hernial tumour; hence the latter enter into the formation of the posterior wall of the inguinal canal; and, from this disposition of the fibres, he imagines, and we think very justly, that a more complete constriction of the neck of the sac will be effected by the operation of two forces in opposed directions than if applied but in one, viz.—that of exerting the compression in the antero-posterior direction.

It is a paradox, but nevertheless true, that both descriptions are correct; for we have seen the whole of the muscular fibres of the transversalis pass over the spermatic cord, and the superficial lamina of the posterior boundary of the inguinal canal consisting of but a thin reticulated structure; in other subjects assuming a true aponeurotic character, sometimes, and most generally, distinctly muscular, and occasionally presenting an intermixture of muscular and aponeurotic structures. In each

ıse the structure under notice was most learly the inferior border, or in so intimate a ɔnnexion with the transversalis, that we re-ırded the former as essentially a part of the tter. We believe this particular and all-ıportant structure to be capable, chameleon ke, of assuming different phases and colours. fence the solution of the paradox.

Let us see what Cloquet says on the sub-ct :—

" *Transversalis Abdominis.*—Beneath the ternal oblique is the transversalis, the lower ırt of which is attached externally to the ıner border of the crista and anterior superior ine of the ilium, and also to the external ırt of Poupart's ligament. Its lower fibres e very thin, take a transverse direction, and rminate in an aponeurosis, which, passing wards, is united to that of the internal ɔlique, which is placed in front of it. This oneurosis is also extended in front of the ctus muscle, to be attached to the linea alba, d to the upper part of the pubes, behind e internal column of the external ring and e pyramidalis muscle.

" The spermatic cord slides underneath the ver border of the transversalis muscle, on a vel with the superior opening of the inguinal nal. 'I have not succeeded,' says Scarpa, n determining accurately whether or not the ver border of the transversalis muscle con-butes in any way to the formation of the incipal origin of the cremaster.' I can ert that, in the majority of dissections ıich I have made, I have been unable to scover that such is the case. In a great mber of subjects I have succeeded, though en with much difficulty, in separating the ternal oblique from the transversalis, and I ve almost always obtained the same result. some cases, however, these muscles are ınd to be intimately united, and apparently ming conjointly the cremaster.

" The posterior surface of the transversalis is relation with the fascia transversalis, which an aponeurotic expansion hereafter to be scribed. They are usually connected to-ther through the medium of a dense cellular ue. Frequently, indeed, it is impossible separate them; both are attached to the ter part of the tendon of the rectus muscle." In a foot note we notice what the author ards as an anomaly.

" In two or three subjects I have found that transversalis muscle was not inserted either ɔ the crural arch or into the pubes. Its ver border was placed about two inches ɔve the point where the spermatic cord ers the inguinal canal, and with which, ısequently, it had not connexion. I have ɔ seen the spermatic cord, on entering the uinal canal, passing between the fibres of transversalis muscle, the fibres being nearly arated from each other, without accompany-the cord in the same manner as those of internal oblique."

The following description of the inguinal canal, though somewhat elaborate, is yet excellent. It could only be understood, we presume, except by those who are already anatomists.

" *Inguinal Canal.*—From the foregoing description, it is manifest that the spermatic cord takes its passage, not through a simple ring, but traverses really a complete canal : it is called the inguinal canal. The aponeurosis of the external oblique is reflected, as I have before said, posteriorly (from Poupart's ligament), and then upwards, to give origin to the fascia transversalis; by this disposition it forms with the latter a deep and narrow channel, the convexity of which is downwards and towards the crural canal, and rests in part on the psoas and iliacus muscles; its concavity being directed upwards corresponds with the inguinal canal. This channel extends from the pubes to the anterior superior spine of the ilium; it gives attachment in nearly its whole length to the internal oblique and transversalis muscles; and, further, it lodges in a portion of its extent the spermatic cord in the male, and the round ligament of the uterus. Its anterior boundary is strong, and is formed by the aponeurosis of the external oblique; below and inwardly it presents, near to the pubes, the opening called the inguinal ring; behind it is in contact with the internal oblique. The posterior bonndary consists of the fascia transversalis, which ascends behind the transversalis muscle; it is pierced by the superior aperture of the inguinal which is situated above and to the outer side of the inferior opening, and is at the distance of about an inch and a half from it; this distance determine the length of the inguinal canal, through which the cord runs obliquely. Between the superior aperture of this canal and the anterior superior spine of the ilium, the channel of the external oblique receives only the internal oblique and transversalis; between the superior orifice and the inferior it forms the inguinal canal, which contains these two muscles, and the spermatic cord; lastly, on the inner side of the inguinal ring it terminates upon the pubes at a little triangular space, bounded anteriorly by the internal column of the ring, posteriorly by the tendon of the rectus and the pyramidalis, and often by some radiated aponeurotic fibres, which ascend from the external column, in a diverging manner, to be attached to the lower part of the linea alba, after having passed behind the internal column of the ring."

We have noticed only the above anatomical point, and we have done so chiefly on account of its having been one of some recent contention.

One chief reason why many parts of the body are differently described by almost every anatomist, may be attributed to each individual having described parts as they appeared in his own dissections; he has there described what he regarded as the most frequent characters, which were truly but

deviations from the normal state. For instance, it is usual to describe the brachial artery as dividing into the radial and ulnar, just below the joint of the elbow; but the division so frequently takes place higher up in the arm, that Tiedemann was disposed to infer the latter to be the natural division.

Every work on anatomy that has come from the pen of Cloquet, may be regarded as a fair standard, and in general may be relied on, and the present does no discredit to its author; it contains perhaps little that is new, but what it does contain is practically useful. The translation does credit to Mr. M'Whinnie.

The British Medical Almanack. London, 1835.

It is rather strange that we should have been so long without anything in the shape of an almanack devoted specially to medical affairs, and that at length, and, as it were, simultaneously, so many should make their appearance. The present is the 3rd work of this kind we have noticed; it is certainly an extremely cheap shilling's worth. The title page is faced by a very pretty lithograph of the New Westminster Hospital, which is equally ornamental to the work, as its prototype is to the surrounding neighbourhood. The calendar is curious and interesting, and must have cost the compiler of the work no small trouble; in addition to all that calendars in general contain, it affords some useful meteorological observations, and also a list of the births and deaths of eminent medical men, to each of whose names is appended the title of their most famous works. After which we have lists of colleges, schools, hospitals, medical societies, &c., so as to comprise within 112 small octavo pages all the information one could desire in an almanack, and with accuracy.

NOTES OF A CASE OF DIFFICULT PARTURITION FROM DEFORMITY OF THE PELVIS, IN WHICH THE PERFORATOR WAS USED.

BY A. FOOTE, ESQ., L.S.A., SPALDING.

[The following case is principally remarkable for the extraordinary malposition of several of the abdominal viscera, caused by a curvature of the spine. The case is by no means unfrequent, but it will tend to illustrate the extent to which the change of situation of any organ may be carried, and the powers of adaptation possessed by nature of accommodating herself to that change, when gradually effected. We extract the few subjoined short notes from a private communication addressed to one of the conductors of the Journal.—Eds.]

Mr. A. Foote was called a few weeks previous to a patient then in labour. The patient was unmarried, about thirty years of age, and primiparous. On examination the case proved to be a face presentation, the chin being turned rather more to the sacrum than the pubis. The pelvis was very deformed. A consultation was held, and it was agreed that the perforator should be employed, which Mr. A. Foote accordingly made use of. The next day, however, the patient herself died.

The autopsy, which took place a few hours after death, showed the vagina and uterus to be perfectly healthy, and uninjured. The pelvis was very much deformed; the antero-posterior, or sacro-pubic, diameter being only two inches and a quarter, the transverse, or bis iliac, measuring about three inches. There was also very considerable curvature of the spine. The kidneys were the organs whose situation had undergone the most remarkable change, the right being much flattened, and pushed up above the inferior margin of the right lobe of the liver, and the left lying between the spleen and the stomach.

The immediate cause of death was inflammation of the peritoneum.

DISTILLED WATERS.

To the Editors of the London Medical and Surgical Journal.

Gentlemen,—Although the carminative waters, directed by the Royal College of Physicians to be kept by the apothecary and chemist, are in reality of but little use in medicine, save as grateful menstrua for the exhibition of more powerful therapeutic agents, yet as they are so ordered to be kept, and are frequently used, it becomes a matter of necessity that they should be prepared of uniform strength. In the Pharmacopœia, they are directed to be distilled, but not one in fifty practitioners or chemists takes the trouble to prepare them in that manner. Independently of the expense which would be incurred, there would be very great loss of time, and no equivalent advantage obtained.

The most common mode of preparing these waters is by adding the essential oil to distilled water. The oil is usually dropped on sugar, and rubbed for about ten minutes before the water is added, or triturated with magnesia, soda, or potash, and afterwards mixed with the water. Some individuals, who are more careless about the result, simply drop the oil into the water, and then shake the bottle, so as, for a short time, to blend the two liquids. All these plans are liable to a great objection, namely, that the oil does not mix properly with the water, it sometimes even floats on the top, and consequently an inefficient, inelegant, and unequal menstrum is the result. The following method of preparing these waters will be found to obviate this great inconvenience. The oil should be dropped on a lump of sugar, which is then to be rubbed up with a drachm of mucilage for about ten minutes, by that time it will be thoroughly incorporated, and the mucilage will assume a

whitish appearance, the water is then to be added gradually, and it is ready for immediate use. About one drop of oil will be sufficient for an ounce of water.

I have the honour to be, Gentlemen,
Yours obediently,
L. S.

THE

London Medical and Surgical Journal.

Saturday, January 10, 1835.

FORENSIC MEDICINE.

Forensic Medicine, as a science, is but of modern date, and the study of it separately has, but within the last few years, been cultivated. It is true that some of the older authors notice the subject, but only in an isolated or cursory manner. Daily, however, do we see the necessity of a knowledge, a complete knowledge, on this important branch of medicine. Important inasmuch as it can be brought into operation in many cases, where every other evidence is frequently not available. In the case at Bristol it comes in like Aladdin's lamp with magic power, and rescues foul murder from oblivion. Forensic medicine is not a separate branch of medical science, but it is a branch which unites the whole, brings them all to bear on one point, as the rays of light to a focus; the study of it, therefore, strictly speaking, is but the study of medicine in general; yet there is an advantage, a great advantage, in the manner in which the subject is taught, the teacher applies the previously acquired knowledge to particular cases, and adduces illustrations from such where it has been, or may be, requisite to employ it. In a case at Bristol, where the whole body of a female was in a state of decomposition, or converted into adipocire, with the exception of the stomach and intestines, and we know, from our acquaintance with chemistry, that arsenic is almost the only substance that can preserve animal structures, under such circumstances, in a state of comparative perfection, and, therefore, even before arsenic was detected by chemical tests, it was inferred that this mineral had been swallowed. The case we refer to is of exceeding interest; it is that of a widow lady, named Mrs. Clara Ann Smith. Fourteen months ago she died somewhat suddenly;—at this period the friends of the deceased, on visiting Bristol, suspected some foul play, upon which the coroner, Mr. Grindon, issued a warrant for the exhumation of the body; and an inquest was held. The details it is unnecessary for us to give,—water had entered the coffin, and the whole of the body, with the exception of the stomach and intestines, was converted into a substance resembling adipocire. The stomach and intestines, however, were in a state of perfection. The various tests, which are used on such occasions, were successively employed, and not a doubt remained on the mind of the chemist, Mr. Herapath, as well as on the minds of the jury, that arsenic had been administered.

Here we see the climax, as it were, of a knowledge of chemistry, and the application of such knowledge to judicial purposes. The accused individual was a Mrs. Burdock, who was, according to the laws of evidence, convicted of "*wilful murder.*" Sulphuret of arsenic was detected in the most obvious manner. This is one of the cases which stamps the triumph of chemistry, not only in its application to the arts and to the sciences, but to the moral and social welfare of human beings.

DRS. GRAVES AND STOKES'S LECTURES.

We have received the following communications from Drs. Graves and Stokes, and, in justice to the high reputation of those gentlemen in the profession, hasten to publish them. Our readers will see, that neither their letters, nor our motives in publishing them, require either comment or explanation.

To the Editors of the London Medical and Surgical Journal.

Gentlemen,—Although it is scarcely necessary to disclaim the lecture given in Dr. Ryan's Journal of the 27th December last, and purporting to be the first of a series containing the "substance of a Course of Lectures on the Institutions of Medicine, now being delivered in the School of Physic in Dublin, by R. J. Graves, M.D., &c.," yet my friends judge it right that I should do so,—the aforesaid lecture being libellously bad, and never delivered by me.

I have not lectured on the topics there spoken of this session, and should be sorry to give utterance to physiology such as the following:—"*Mucus*, all the mucous membranes secrete a liquid resembling pus. *Bones.* * * * By contracting the earthy matter, by means of an acid, the bone becomes flexible like cartilage, hence arise rickets and mollities ossium in the human subject."

To conclude, gentlemen, I may observe that my reasons for no longer contributing to Dr. Ryan's Journal are completely justified by his present conduct.

Robt. J. Graves.

1*st January*, 1835.

To the Editors of the London Medical and Surgical Journal.

Gentlemen,—I observe that in the number of Dr. Ryan's Journal for the 27th of December, the Editor has inserted a lecture, which he puts forward as one of mine, and the continuation of my course on the Theory and Practice of Medicine, which has already appeared in your Journal, both of which assertions are utterly unfounded.

This lecture was never delivered by me, but is obviously composed by the Editor, with the assistance of a few unconnected notes of various lectures, which were delivered long ago, and not in the *Park-street School*, notes which have been taken by some singularly ignorant person.

The lecture, as given in Dr. Ryan's Journal, is such a tissue of absurdities and errors, that it seems strange how any Editor of a Medical Journal could be so blind to its interests, as to publish so clumsy and so ridiculous a fabrication. I would have allowed this attempt to speak for itself, but that I feel that this is a matter which concerns all those who are engaged in the teaching of medical science, for if they are liable to be injured by these indirect libels, it will become necessary, for the credit of the profession and the protection of individual character, that some steps should be taken to put an end to such a grievance.

I remain, Gentlemen,
Your obedient servant,
Wm. Stokes.

Dublin, December 31*st*, 1834.

Foreign Medicine.

Additions to M. Magendie's Formulary in his eighth and last Edition.

Lactic Acid.

The existence of lactic acid has for a long time been doubted. It is true, that it has been admitted by some of the most distinguished chemists, but then, again, it has been denied by others of equal celebrity, and who have believed it to be nothing more than acetic acid. The advanced state of therapeutics

has, at the present day, decided the affirmative of this question, and it appears to M. Magendie probable that it will become a very useful medicine.

The process for obtaining Lactic Acid.

It may be extracted from milk, or from the juice of the red beet-root. When procured from the latter, the juice is placed in an oven, which is kept at the constant temperature of 25° to 30°. In the course of a few days a thick fermentation takes place, and hydrogen mixed with carburetted hydrogen gas in great abundance escapes. When the liquid has retaken its primary fluidity the fermentation has ceased, which, in general, takes place in the course of two months. This is then evaporated to the consistence of syrup. The whole mass is soon traversed by a multitude of crystals like *mannit x;* these are washed with small quantities of cold water and compressed, and then are of the greatest purity. The mass otherwise contains a juice, which possesses all the properties of the sugar from grapes.

The product is then heated with alcohol, which dissolves the lactic acid, and a great quantity of matter is deposited, which has not at present been examined. The alcoholic extract is again washed with water, and a fresh deposition is left. The solution is afterwards saturated with the carbonate of zinc, from which there results a precipitate much more abundant than the former. After concentration the lactate of zinc crystallises; these crystals are then treated with water, to which some animal charcoal is added, previously, however, washed with some hydrochloric acid. It is now filtered, and the lactate of zinc separates in perfectly white crystals; these crystals are again washed in boiling alcohol, in which they are soluble. By afterwards mixing this with barytes and sulphuric acid, the lactic acid is withdrawn from it. By agitating this with sulphuric æther it becomes separated from traces of flocculent matter.

A large quantity of milk left for a long time to fermentation, and treated in a similar manner, furnished also some lactic acid. M. Corroil has recognised its presence in an infusion of nux vomica (*Strychnos nux vomica*).

Physical and chemical properties of Lactic Acid.

Concentrated, the lactic acid is a colourless liquid of the consistence of syrup, and the density of which at the temperature of 20°5 is equal to 1·215. It is void of smell, has a powerful acid taste, and may be compared to one of the most powerful vegetable acids. Exposed to the air it rapidly absorbs moisture; water and alcohol dissolve it in every proportion. One of its most remarkable properties, and which ought to be especially known in medicine, is its promptitude in dissolving the phosphate of lime.

Employment of Lactic Acid.

Lactic acid being the principal agent for dissolving the aliments in the stomach, I have thought that it might be employed with advantage in dyspnœa, or in cases of debility of the digestive functions. I give it in the form of lemonade, or of *pastilles. Voici* the formula which I most frequently employ:—

Lactic Lemonade.

Solution of lactic acid . .	1 to 4 drachms
Water	1 pint
Simple syrup	2 ounces.

I have used it in the form of *pastilles,* and this is the most convenient method of using it.

Pure lactic acid . .	2 drachms
Sugar	1 ounce
Volatile oil of vanilla .	4 drops
Gum	q. s.

This quantity forms half a dozen pastilles. They must be kept in a vessel well stopped. Without any inconvenience six of these pastilles can be taken in twenty-four hours.

In consequence of the promptitude with which this acid dissolves the phosphate of lime, it would be rational to employ this in cases of white gravel, or of the phosphate of lime.

I have commenced a series of clinical experiments with the lactate of soda, of potass, &c., but at present I have not obtained anything that is worth public notice. Nevertheless I cannot help recommending these salts to the attention of medical men.

Hydrocyanic Æther.

M. Pelouze, a very clever chemist, has discovered a composition, which, by its physiological properties, resembles prussic acid, without having such a horrible activity.

Chemical Properties of Hydrocyanic Æther.

This is a colourless liquid, having a very disagreeable, penetrating, and alliaceous odour, the density of which is 78°. It boils at 82°, is very slightly soluble in water, but soluble in every proportion in alcohol and sulphuric æther. It is very inflammable, and burns with a blue flame. Caustic potass affects it only when in a great state of concentration.

Preparation of Hydrocyanic Æther.

To prepare hydrocyanic æther, it is necessary to mix together equal parts of the sulphocyanate of baryta, and the cyanuret of potassium, which are applied to a gentle temperature. By distillation, a nearly colourless liquid is obtained, which separates from each other in two distinct portions. The lightest of the two consists of hydrocyanic æther, but not in a pure state; it is combined with water, alcohol, sulphuric æther, and hydrocyanic acid. To purify it, it is briskly agitated with four or five times its volume of water; afterwards for some time it must be exposed to a temperature of 50° or 60°, and again mixed with water. Then for twenty-four hours

it must be left in contact with the chloride of calcium, and afterwards distilled.

The æther thus obtained is pure, it is composed of

Carbon .	. 61,23
Hydrogen .	. 8,96
Azote .	. 21,81
	100,00

Its formula is c. 4, h. 8, and a. 2, h. 2.

It corresponds to equal volumes of olefiant gas and vapour of prussic acid, condensed in one volume.

Physiological Properties of Hydrocyanic Æther.

Six drops of this æther put into the mouth of a dog have speedily produced long inspirations, cerebral congestion, with remarkable agitation of the feet.

This state has lasted for four minutes, afterwards it has gradually disappeared, and in the course of half an hour nearly ceased.

Six drops injected into the jugular vein have rapidly caused death, producing phenomena similar to prussic acid. I have repeated these experiments a number of times, and in different ways, and I have assured myself that it may with safety be administered to men.

I have since administered it to several of my patients, and find it of more benefit than prussic acid.

Remarkable Instance of Hæmorrhagic Tendency in a Family.

Dr. Riecken, a German physician, in a recent work, has given an account of a very remarkable hereditary transmission of the *hæmorrhœal diathesis* through several individuals in a family. The father of this family, Ernest P., was a husbandman and joiner, who had always enjoyed good health, and at the time of the publication of Dr. Riecken's work, was in his eighty-sixth year. His second wife, by whom he had the children to be mentioned presently, was of delicate health. In her thirtieth year she was attacked with rheumatic gout, and, after this ceased, with curvature of the spine, asthmatic complaints, and frequent pain under the breast bone. By and bye signs of water in the chest came on, general dropsy followed, and she died of that disease in her sixty-sixth year. Neither the wife nor the husband was ever subject to hæmorrhage, or to petechial spots. This couple had twelve children, five sons and seven daughters, of whom four died of small-pox, one of eclampsia, and three boys and one girl of hæmorrhage.

William Louis, one of the three boys, enjoyed good health till his fourth year, when he was attacked with bleeding from the left nostril, which continued, with occasional intermissions, for eight days, and was only arrested by stopping up both nostrils firmly with the *boletus igniarius* (zündschwamm). Two days afterwards, he was seized with anxiety and a sense of constriction in the præcordia, attended by swelling and tenderness there, then with cold sweating and deadly paleness, and at length with vomiting of black fluid blood, which repeatedly returned, and proved fatal in the course of a week. In another of the boys, John Christian William, blue spots, unattended with pain, frequently broke out on the skin between the first and eleventh years, but were not accompanied by hæmorrhage. In his tenth year he was attacked with violent rending pain in the extremities, more especially in the limbs, which abated in a month and a half, after a hard tumour formed on the left knee. This tumour had been present for a year and a half, when he was suddenly seized with violent toothach in the foremost grinder of the left side of the lower jaw, and the pain was so excruciating that he consented to the extraction of the tooth; the tooth was quite healthy. A gush of fluid blood immediately took place from the cavity, and nothing could check it. The poor boy gradually became blanched like wax, and expired on the eighth day. Philip Henry, the third boy, presented the appearance of blue spots on the skin, particularly of the buttocks, even during the first year of his life, yet without any signs of weakness. When a year and a quarter old, he died while vomiting fluid blood which had begun the day before, without any previous appearance of ill health. The daughter died four days after birth in consequence of hæmorrhage after the division of the frænum of the tongue.

The same striking constitutional infirmity likewise appeared among the grand-children of Ernest P., born of his youngest daughter, Louisa Catherine. This woman, who is still alive, and in the 32nd year of her age, is short in stature, and light haired, has grey eyes, and a delicate fair complexion. She never had purple spots, or exhibited any tendency to hæmorrhage; nay, wounds, and even apertures in veins, made by the operation of blood-letting, healed in the usual manner. The menses commenced in her thirteenth year, and were usually rather abundant, and of eight days' continuance. She suffered much from tooth ach and neuralgic affections of the extremities, was, indeed, seldom altogether free of wandering pains, and, in her pregnancies, was so much affected by a tendency to plethora that it was frequently necessary to withdraw blood. The blood coagulated more slowly than usual, was very dark, contained much serum, and presented a thin buffy coat. The hæmorrhage immediately after delivery, as well as the lochial discharge, was always profuse. Her husband is a stout healthy man. They have had six children, four boys and two girls, of whom only the eldest girl and youngest boy are now alive. The other daughter died of convulsions, when nine months old, and the three boys of hæmorrhage. The surviving

girl is very healthy, and never had either blue spots or bleedings.

The four boys were all born easily, and the navel healed up without hæmorrhage. They all had a disproportionately large head, with unusually loose sutures, and fontanelles of uncommon size and slow in filling up. Their bodies were delicately and regularly formed, the nails were of the natural appearance, the skin fair and delicate, with the veins shining distinctly through, and the countenance pale, sickly, and bloated. They had all blue eyes, and one of them fair, but the three others black, hair. Dentition went on in all in the usual manner. They were very lively, of mild dispositions, and the eldest showed much cleverness. The operation of vaccination, which was performed by incisions, was not followed by any untoward effects. All had from birth a very fœtid discharge of a white, flaky, puriform mucus from each ear.

The eldest of these boys manifested a distinct tendency to hæmorrhage in the seventh month: dark, irregular spots appeared on various parts of the skin, varying in size from that of an *achtgroschen* piece to that of half a man's hand, and without any external injury; and these were at first pale red, but as they increased in size rapidly became bluish-black, and then reddish-blue, bluish-green, and dirty yellow as they were disappearing. At times the body was entirely covered with them: they were attended with hardness and swelling, but not with pain. The first attack of hæmorrhage occurred in the first year in consequence of his having bitten the tip of his tongue, and it was not arrested till various artificial means had been tried in vain, and nature accomplished it after the child was reduced to the lowest possible state of exhaustion. When he was eighteen months old a second attack took place in the form of epistaxis, which was not checked till he was almost at the point of death; when it ceased under the use of the acid elixir of Haller and laudanum, and during the deep sleep which supervened. On his awaking, general convulsions attacked him; then deep sleep returned, and after this he awoke refreshed, and soon recovered. From this period till he was four years and a half old, he had regularly every three months an attack of epistaxis from the left nostril, which continued between four and ten days with occasional intermissions, and was preceded by lancinating headach, sounding in the ears, excitement of the pulse, flushing of the face, and lividity of the lobes of the ears. The blood was dark red, thin, without tendency to coagulation, and towards the close of the paroxysm pale dirty red in colour. The hæmorrhage never ceased till the child, after repeated fainting fits, was brought almost to the point of death. In his fourth year he complained much of shifting pains, particularly in the left thigh, which were particularly troublesome before the customary bleedings, or on any change of weather, but became much less so on a swelling of the knee-joint making its appearance. The swelling confined him for some time to bed, but it was diminished by proper remedies; upon which a fresh attack of hæmorrhage occurred, and after this the pains ceased. The child, however, was pale and exhausted, and in two days he died with all the symptoms of inflammation of the bowels. Sulphate of soda had no effect in checking the hæmorrhages in this case.

In the second boy, the blue spots began to appear fourteen weeks after birth. When ten months old, a furuncle formed in the right arm-pit, which was carefully opened. At first pus alone issued, but afterwards violent hæmorrhage ensued, which continued for three days, notwithstanding the constant use of tents and compresses dipped in alum. After the lapse of nearly three-quarters of a year, an almost fatal hæmorrhage followed a trifling injury of the frænum of the lower lip, and this was not checked till on the third day the actual cautery was resorted to. After this, with the exception of the blue spots, the child was healthy, and became plump and strong. But when two years and a half old, plethoric symptoms began to show themselves as in his elder brother's case, and he was attacked with pleuro-peripneumony. Dr. Riecken avoided all evacuations of blood, and brought him through his illness by other antiphlogistic remedies. Suddenly, however, after a return of fever, copious bleeding took place from both nostrils, for which all the usual means, including Glauber's salt, were in vain put in requisition, and it was not till the child had repeatedly fainted, and was as pale as a corpse, and till the blood had in the end flowed for six hours as pale as bloody serum, that the hæmorrhage ceased spontaneously. Half a year afterwards he was attacked by flying pains in the extremities, followed by swelling in the left ankle, and when this disappeared, by swelling in the left knee. Recovery, however, was gradually so far accomplished, that the child could walk again, when, in an accidental fall, a small wound not larger than a pin's head was inflicted on the point of the tongue. Profuse hæmorrhage commenced, and for five days it continued, although every conceivable remedy was tried, including three applications of the cauterising iron, till at length the breathing and pulse ceased, the skin became icy cold, the eyes lost their lustre, and death was believed to be at hand. After a time signs of animation appeared; the hæmorrhage was found to have ceased, and the child became convalescent. In fourteen days he began to complain of occasional stitches under the ribs of the left side, accompanied with dry cough; and, during a fit of coughing, blood began to gush from both nostrils. The blood was fluid, thin, brownish in colour, and fœtid. It continued to flow in spite of every remedy which could be thought of, and the little patient soon died slightly convulsed.

The third boy, in consequence of the frænum of the tongue being unskilfully divided, was attacked when three months old with profuse hæmorrhage, which lasted for three days, and only yielded after repeated applications of the actual cautery. The blue spots did not begin to show themselves till the sixth month. The plethoric symptoms observed in the two former cases appeared also in the present instance about the thirteenth month, and especially some weeks before his death, which took place after an attack of hæmorrhage of two days' continuance, occasioned by an injury of the tip of the tongue with an incisor tooth. On this last occasion repeated cauterisation was of no use.

In the youngest boy, who is still alive, a chronic, itchy eruption on the face was added to the discharge from the ear, which he had in common with his brothers. Blue spots began to appear on the skin four months after birth; but, subsequently to the administration of ass-colt liver oil (!) to the mother, both the eruption and the livid spots disappeared. Whenever the mother intermitted the oil the spots re-appeared; and whenever she resumed it, the discharge from the child's ear dried up, the spots ceased to form, nay, on one occasion he sustained a wound of the ring finger with a sharp knife, yet the hæmorrhage was not greater than in other children. Subsequently a furuncle on the shoulder was opened, and a second time a wound accidentally inflicted without any particular hæmorrhage. The further history of this case is not given.

Besides the mother of this family, Ernest P. had two other daughters, who, together with their families, never suffered from hæmorrhage or ecchymosis; but they were very liable to gout, rheumatism, chronic abscesses, and eruptions. Among his ancestors and collaterals there was no one ever liable to hæmorrhage; nor can the least relationship be traced between his family and any of the previously ascertained instances of families possessing this constitutional infirmity.

The author in his general remarks seems disposed to ascribe the constitutional hæmorrhagic diathesis to a gouty taint; but this is surely an erroneous idea, otherwise it ought to be much more frequently met with. In the present, as in every previously recorded instance, it is very remarkable that the infirmity was confined to the male branches of the family, and that, nevertheless, it was transmitted through the female branch to the males of the next generation.

The following letter was addressed by M. Civiale to the Academy of Sciences, Dec. 22, 1834:—

Treatment of Fungus of the Bladder by Ligature.

I have the honour to submit to the Academy a fact which appears to me worthy of public attention, as it shows the rapid progress of surgical art. Certain tumours which are developed in the bladder, principally towards the urethral orifice, acquire at times such a volume as to give rise to very serious symptoms. Up to the present time our art had been unavailing, not only to cure, but even to recognise them, and their existence has not been discovered till after death. Employing the instruments used for lithotrity has furnished me with certain means to recognise them on the living, to determine their consistence, to appreciate their volume, and to judge whether they are attached or not by a pedicle. These first signs have hinted to me a series of curative proceedings, which, after working some time in the dark, have led me to some very satisfactory results.

I employed, in the first place, a ligature, by means of a special apparatus, which would here occupy too long a time to enter into a description, but this proceeding can be applied only in a very small number of cases. The process is so long, it presents so many difficulties, and fatigues so much the patient, that I was soon obliged to renounce it.

I then conceived the idea of having recourse to extraction, by means of instruments analogous to those which I first used for crushing the stone, but mounted in a different manner. I put this in practice for the first time on the 23rd of October, 1827, on a patient who had a small fungus attached by a pedicle. The operation was simple and easy; the patient passed a large quantity of blood with urine; no bad symptoms supervened, and on the following day the patient was comparatively well. I made use of a small instrument; and, although the fungus was closed in the pincers, the whole easily passed through the urethra. This is one of the most simple cases that I have met with.

Another patient was submitted to the same process on the 12th of March, 1829, but her situation presented much more danger; the tumour was hard, and of the size of a walnut. It was necessary to crush it, and reduce it to a pulp, before it could be made to pass through the urethra. The operation was painful and difficult; two sittings became necessary for its completion, the latter of which took place seven days after the former. Many surgeons were present, amongst whom I shall quote MM. Baffos and Costello, who assisted me in the operation. Three months afterwards the patient died from typhus fever, without any symptom of disease of the bladder.

I performed also the extraction of a vesical fungus on a third patient who suffered also from stone, which I did not attempt to break until after the destruction of the tumour. In this case the operation presented a peculiarity which has since made me renounce this proceeding. In spite of reiterated torsions, the pedicle of the fungus was not completely detached, and a thread-like portion of the mucous membrane of the urethra, to the extent

of many inches, was dragged with it. The promptitude and facility with which this species of membrane is reproduced, caused me to believe it was of minor importance. In fact, this case proved successful; but the patient suffered much for the space of three days, and the urethra for some time presented a state of great sensibility.

The third means that I have employed against fungous tumours of the neck of the bladder, is by crushing them. After having seized and isolated the tumour, by a proceeding analogous to that which I use in cases of small calculi, I close the instrument with force, in such a manner as to suddenly smash the fungus, and thus reduce it to a pulpy state; but instead of withdrawing the instrument thus closed, and detaching the pedicle, I open the blades, and detach them from the pulpy mass, which is more easily effected when the bladder is partly filled with water; then on closing the instrument I withdraw it. The tumour thus, as it were, reduced to pulp, escapes sometimes immediately with the urine, and at others at a later period. Many patients have been operated on with success in this way. There is one at the present time in the Hôpital Neckar. The operation was performed on Wednesday last, on the same day, the tumour, I have now forwarded to the Academy, was expelled; no symptom of importance has supervened. A short time after the operation, the patient discharged his urine with great facility, which for many months he had been unable to effect, in spite of every treatment he had received. (Signed) CIVIALE.

British Hospital Report.

WESTMINSTER HOSPITAL.

Lithotomy.

JOSEPH STONE, aged 6 years, for nearly two years had been frequently observed to pull at the prepuce; this seems, however, to have attracted no further notice. At the commencement of this period, it appears that he had received a blow on the loins from falling down stairs. About three months ago, micturition became painful and more frequent, the urine scanty, of a reddish colour, and containing a slimy fluid. Some minutes before passing urine he complained of most excruciating pain in the glans penis, as well as during the time of evacuating the bladder, but almost immediately afterwards the pain subsided. He suffered the greatest agony during the night, seldom resting longer than an hour without having a strong desire to pass urine. He had been under the care of a surgeon, who repeated that the urine was voided in small quantities, was of a viscid nature, and appeared like a mixture of mucus, pus, and blood. It was not alkaline or more acid than natural. A sound had been passed two or three times; at one time a calculus could be distinctly heard, at another it was not audible. Uva ursi, alkalies, and opiates of various kinds had been administered without affording much if any relief. On the 6th of Dec., 1834, he was received into the hospital under the care of Mr. Guthrie, but was treated by Mr. Thompson, the assistant-surgeon. The existence of a calculus in the bladder was at once recognised. Palliatives and anodynes were administered for about a month, and on the 3rd of January, 1835, he was brought into the theatre to be operated on.

The child was bound in the usual manner, and Mr. Thompson introduced the sound, which was then held by Mr. Guthrie. The incision was made with a scalpel, and after the urethra had been opened, the *bistoire caché* was passed, and the sound withdrawn. The bistoire was pushed on into the bladder, and its entry was marked by the evacuation of its fluid contents. The forceps were afterwards readily introduced, and the calculus extracted with great facility. The child was then unbound, a pledget of lint applied to the external wound, and the little fellow sent to bed.

The first incision divided a small arterial branch, but it gave very little trouble. The straining of the patient during the passage of the forceps caused the evacuation of a portion of the contents of the rectum per anum, which mingled with the blood from the wound, and gave at first sight an appearance as if they had passed through the wound, and consequently caused some to think that the rectum had been wounded. The calculus was a round one, rather large for a child; it was of the kind called "mulberry," with a lithic acid nucleus. The operation was very neatly performed in three minutes.

Two days afterwards, however, appearances had changed materially; during the remainder of the previous day, and, indeed, until the morning, he had laboured under diarrhœa, and soon after some tenderness of the abdomen supervened, for which leeches were applied. At this visit he seemed to be sinking; in fact, collapse was approaching. He was evidently insensible, with a small and thready, almost imperceptible, pulse. He was ordered saline draughts, with an excess of ammonia, but without effect. He died the next morning at a quarter past four, A.M.

The autopsy was performed on the 7th, at 2, P.M. The membranes of the brain were congested with venous blood, but the substance of the cerebrum was healthy, as were also the viscera of the thorax and abdomen, with the exception of the right kidney, the pelvis, and ureter, all of which were dilated. The coats of the bladder were considerably thickened, and there were patches of injection in the mucous membrane, with one or two small fungi projecting into the cavity of the bladder The incision was clean, and the whole *trajet* of the operation in a proper condition. The rectum was not injured.

A GENERAL BILL OF THE CHRISTENINGS AND BURIALS

Within the City of London and Bills of Mortality, from Dec. 10, 1833, *to Dec.* 9, 1834.

		Christened		Buried	
In the 97 Parishes within the Walls		,,	969	,,	1162
In the 17 Parishes without the Walls		,,	4247	,,	3507
In the 24 Out-Parishes in Middlesex and Surrey		,,	17986	,,	13402
In the 10 Parishes in the City and Liberties of Westminster		,,	4014	,,	3608
	Males		13601	Males	10811
	Females		13615	Females	10868
	Total		27216	Total	21679

Of the number Buried were—

Stillborn	1009	Fifty and under Sixty	1979
Under Two years of Age	4956	Sixty and under Seventy	1978
Two and under Five years	2044	Seventy and under Eighty	1611
Five and under Ten	988	Eighty and under Ninety	739
Ten and under Twenty	850	Ninety and under One Hundred	86
Twenty and under Thirty	1520	One Hundred	1
Thirty and under Forty	1892	One Hundred and One	1
Forty and under Fifty	2025		

Decrease in the Burials reported this Year—4898.

DISEASES AND CASUALTIES THIS YEAR.

DISEASES.			
Abscess	127	Inflammation of the Brain	207
Age and Debility	2333	Inflammation of the Lungs and Pleura	375
Apoplexy	360	Influenza	9
Asthma	796	Insanity	170
Cancer	108	Jaundice	54
Childbirth	289	Jaw-locked	8
Cholera	630	Liver, Diseased	287
Consumption	3792	Measles	528
Constipation of the Bowels	37	Miscarriage	19
Convulsions	1875	Mortification	225
Croup	144	Paralysis	158
Dentition, or Teething	395	Rheumatism	24
Diabetes	5	Scrofula	19
Diarrhœa	32	Small Pox	334
Dropsy	836	Sore Throat and Quinsey	35
Dropsy on the Brain	682	Spasm	88
Dropsy on the Chest	56	Stone and Gravel	21
Dysentery	10	Stricture	7
Epilepsy	23	Thrush	90
Erysipelas	51	Tumour	27
Fever	497	Venereal	11
Fever, Intermittent or Ague	12	Worms	5
Fever, Scarlet	523	Unknown Causes	948
Fever, Typhus	90	Stillborn	1009
Fistula	1		
Gout	70	CASUALTIES.	
Hæmorrhage	38	Drowned	125
Heart, Diseased	110	Died by Visitation of God	38
Hernia	16	Excessive Drinking	4
Hooping Cough	602	Found Dead	16
Hydrophobia	8	Killed by various Accidents	155
Indigestion	8	Murdered	5
Inflammation	1723	Poisoned	10
Inflammation of the Bowels and Stomach	347	Suicides	42

ROYAL COLLEGE OF SURGEONS.

Names of Gentlemen who received Diplomas during the month of December, 1834.—George L. Cooper, Woburn-place; Stephen Brown, Newcastle-upon-Tyne; P. Roe, E. I.; R. B. Barlow, Blackburn, Lancashire; J. G. R. Moore, County Cavan; J. C. Shelton, Broomyard; J. Leach, Rochdale; S. Davies, Llandonock, Pembrokeshire; T. Coffin, A.; J. Morris, Stratford upon-Avon; R. Davis, ———; L. P. Tripe, Devonport; J. Blake, Belmont, Galway; R. Craven, Leeds; H. W. Milburn, Sunderland; H. Booth, Ashton-under-Line; R. G. Carey, Guernsey; J. Dodd, Moulseford, Berks; G. Leonard, Dursley, Gloucester; J. M. Carvalho, ———; H. Parry, Monmouthshire; J. Sheridan, Killasandra, Cavan; E. Hulme. Bromley; F. H. Skurray, Watkins-place, Pimlico; W. Quinton, Wolverhampton; J. B. Hodgson, Gloucester-street, Queen's-sq.; K. E. Ellison, Liverpool.

APOTHECARIES' HALL.

Names of Gentlemen to whom the Court of Examiners granted Certificates of Qualification on Wednesday, 31st Dec.:—John Donaldson Potts, Jamaica; William Robins, Moreton-in-the-Marsh, Gloucestershire; Walter Duke, Hastings; Francis Wyley, High Onn, near Stafford; Nicholas George Hobson, London; Edward Baker, Birmingham; James French, Neath, Glamorganshire; John Hutchinson, Newsham, Yorkshire; John Dickenson, Wrexham.

MISCELLANY OF FACTS.

The Faculty of Physicians and Surgeons of Glasgow granted Surgical Diplomas to the following gentlemen during 1834:—John Carmichael Jameson, Dumfries-shire; James Montgomerie, Kilwinning; R. Herdman Milne, Dundee; James Richardson, Kirkconnell; James Dickson Holywood, Dumfries; James Paterson, Largs; John M'Meikan, Stranraer; John Harley, Dumfermline; John Denman, Tarbolton; Geo. Welsh, Cumnock; Hugh James Cheyne, Edinburgh; Leslie Mudie Wilkie, Musselburgh; John M'Coll, Appin; Daniel M'Intyre, Appin; John Boag, Glasgow; Alex. M'Kenzie, Glasgow; Samuel Martin, Skye; James Riddell, Glassford; Alex. Cook, Arran; John Hodge, Paisley; John Bell, Portsoy; Daniel Richmond, Paisley; John Steedman, Glasgow; Matthew Gibson, Glasgow; Robert Johnston Risk, Glasgow; John Lauder, Glasgow; John Stewart, Strathaven; Daniel Livingston, Appin; William Dobbie, Ayr; James Jeffray, Lanarkshire; John Kelly, Glasgow; A. Gray, Glasgow; Andrew Jackson, Mearns; Nicol M'Intyre, Easdale, Argyleshire; Robert Howie, Eaglesham; James Cook Neil, Kirkaldy; John Gorman, Rutherglen; Alexander Cochran, Linwood; Andrew Nisbet, Glasgow; John Pinkerton, Paisley; Alexander Wood, Glasgow; John Burnside, Parish of Morton; William Weir, Galashiels.

England.—John Bond, New Seaton; Wright Cane, Thorney Abbey; James Wilson, Hexham; Frederick B. Hunt, York; Charles W. Kinglake, Somersetshire; Anthony Ettrick, Bishop Wearmouth; William Murray Brown, Isle of Man.

Ireland.—Thos. Travers Burke, M.D., Bandon; Robert Thomson, Ballynhinch; Allen Keating Boyce, Carlow; James Henry M'Manus, Mount Nugent, Co. Cavan; O'Bryan Mahoney, Bruff; John Sheridan, Balentemple.

Henry J. Donnett, Gibraltar; John Cameron, Perth, Upper Canada; Amasa P. Coy, New Brunswick; Robert Bryden, Demerara; Alex. Huie, Kingston, Jamaica.

APPOINTMENTS.

Naval.—Messrs. A. J. Palmer and J. Selliek have been appointed supernumerary assistant-surgeons to the Victory. Assistant-Surgeon J. Dais to do duty at the Portsmouth division of Marines, v. Machonehy, discharged. Mr. J. Gibson, assist.-surgeon to the Alban steamer. Mr. J. L. M'Call, assistant-surgeon to the San Josef. N. Magrath, to be surgeon to the Rattlesnake. R. C. Nutt, to be surgeon to the Victor. Mr. J. W. Bowler, to be assistant-surgeon to the Rattlesnake. Mr. A. Allen, M.D., surgeon, and Mr. J. Sinelair, M.D., assistant-surgeon, Pelican. Mr. Thomas Gibson, surgeon, and Mr. Thos. Hunter, assistant surgeon, Scylla. Mr. M. C. Nutt, assistant-surgeon, Victor. Mr. John Dunlop, surgeon, Jaseur. Mr. W. M'Clure, surgeon, Belvidera. Mr. J. M. Donald, surgeon, Champion. Mr. J. K. Ballard, assistant-surgeon, Blazer. Mr. Francis Osborne, assistant-surgeon, Columbia. Mr. James Salmon, assist.-surgeon, Columbine. Mr. W. Bayne, assistant-surgeon, Firefly. Mr. J. Ferrier, assistant-surgeon, Mutine. Mr. Wm. D. Willes, assistant-surgeon, Flamer. Mr. A. C. Air, assistant-surgeon, Lyra. Mr. C. Conyngham, assistant-surgeon, Scorpion.

Military.—Staff Assist.-Surgeon Hugh Fraser, to be surgeon of the 60th reg., v. Melvin, appointed to the Staff. Staff Assistant-Surgeon C. Quarterley Palmer, to be surgeon of the 92nd Foot, v. Dr. Harding Walker, who retires upon half-pay. Surgeon N. Melvin, 60th reg., to be surgeon to the Forees, v. Dr. Colin Allan, who also retires upon half-pay.

General.—Mr. R. Gardener Hill, house surgeon and apotheeary to the Lineoln General Hospital. Mr. Watson, surgeon of the Royal Edinburgh Infirmary, v. Liston. Dr. Castle, physiciar, and Mr. D. Richardson, surgeons to the Brighton Dispensary.

WEEKLY BILL OF MORTALITY.

London, Tuesday, 6th January, 1835.

Abscess	2	Hooping-Cough	15
Age and Debility	30	Inflammation	30
Apoplexy	3	Inflammation of the Bowels & Stomach	4
Asthma	13	Inflammation of the Brain	1
Cancer	2	Inflammation of the Lungs and Pleura	17
Childbirth	1	Insanity	4
Consumption	58	Liver, Diseased	2
Convulsions	30	Measles	15
Croup	7	Mortification	1
Dentition, or Teething	5	Paralysis	2
Diarrhœa	1	Small Pox	8
Dropsy	11	Sore Throat & Quinsey	2
Dropsy on the Brain	13	Spasms	2
Dropsy on the Chest	4	Thrush	3
Epilepsy	1	Unknown Causes	9
Fever	5		
Fever, Scarlet	7	Stillborn	19
Fever, Typhus	2		
Hæmorrhage	2		
Heart, Diseased	5		

Males 191 Females 147 Total 338

Increase in Burials reported this week, 25

DEATHS.

Mr. Abraham Wyke, of Broseley, surgeon. He died suddenly of an affection in the chest while taking a ride in his carriage. In Edinburgh, Mr. Robert Mair, surgeon, late of Alloa. Mr. Edward Scott, of Pool-lane, Liverpool, surgeon. At Africa, on board ship, Mr. John M'Ewen, surgeon, late of Liverpool. Mr. Wm. Quinn, late house-surgeon of St. Bartholomew's Hospital, London.

Books and Correspondents in our next.

All Communications and Books for Review to be forwarded (free of expense) to the Publisher, 356, Strand, near King's College.

THE

London Medical and Surgical Journal.

No. 155. SATURDAY, JANUARY 17, 1835. Vol. VI.

LECTURES

INTRODUCTORY TO THE COURSE OF THE

INSTITUTES OF MEDICINE,

DELIVERED BY

ROBERT J. GRAVES, M.D.,

King's Professor, Dublin.

LECTURE VI.

Gentlemen,—In my last lecture I spoke of electricity as connected with its development in certain animals, and stated that there is no land animal, bird, or reptile, known to possess a provision for the accumulation and propagation of electricity, but that among fishes we find not less than six different species in which electrical organs exist, which are charged and discharged at the will of the animal, and with various degrees of intensity. I mentioned also, that in all these species large nerves supply the electrical organs from different sources. Thus, the torpedo has three electrical nerves, one derived from the fifth and two from the eighth pair; in the silurus they are derived from the eighth alone; and in the gymnotus from the spinal cord. These nerves divide into several minute branches, each accompanied by an artery and vein, and their ultimate ramifications are distributed over the partitions of the cells, which form the electrical apparatus. In examining these animals the anatomist cannot fail to be struck with the diminutive size of the nerves destined for the common purposes of sensation and volition, compared with those which go from the brain to the electric organs. Thus, in the common torpedo, "the three nerves for each electric machine are of enormous size, each of them being fully equal in thickness to the great sciatic in the human body *." These cells vary as to their arrangement and situation in the different species. In the torpedo, the electrical organ consists of cells horizontally arranged and containing a fluid of a thick and viscid nature; they are about the size of those of a honey-comb, and arranged perpendicularly, extending from the dorsal to the abdominal surface. In the gymnotus they are somewhat of the same structure, but instead of being perpendicular they are placed parallel to the surface. In the silurus they are formed by a portion of the skin, which is there peculiarly cellular.

The shock from all these animals is completely dependent on the will, and they have the power of modifying it so as to make it slight or intense according to pleasure. It is imparted not only on contact but also through water, and hence they are enabled to kill their prey at some distance. In the 14th volume of the Transactions of the Linnæan Society, Couch remarks, that the shortness of the alimentary canal in these animals seems to require the aid of an electrical apparatus, which not only kills their prey, but also renders it more easy of digestion. This hypothesis appears very improbable, for we know of no experiments which prove the easier digestibility of flesh killed by so slight a shock. To me it appears quite satisfactory to consider the electric organs as a means of capture and defence, objects accomplished in animals by a thousand different expedients. The system of animated nature seems a system of compensation, in which as much ingenuity is expended on contriving means to destroy life as to save it. The electric missile of the torpedo is not more cunningly devised to protect the bearer than to kill what is destined to become its prey. It is a curious fact, as connected with the intimate relation which exists between the nervous and electrical influences, that if you divide the nerves, which supply the electrical apparatus, the animal loses the power of generating electricity. It is also remarkable, that the cells are copiously supplied with blood-vessels. Girardi maintains that the electrical torpedos are far more abundantly supplied with blood than the other species of torpedo, thus showing the connexion between secretion and electricity.

As the discovery of the Galvanic battery is

* See Descriptive Catalogue of the Preparations in the Museum of the Royal College of Surgeons in Ireland, p. 106. By J. Houston, M.D., a work of modest pretensions, but which contains a vast store of valuable and *original* information.

of comparatively recent date, it has been reserved for modern times to understand the electrical apparatus of these animals. Our predecessors, who lived before the brilliant discoveries of Galvani and Volta were made public, might see but could not comprehend this singular phenomenon. What a triumph for the industry and ingenuity of man to explain things whose existence had been long known, but whose nature had not been understood, and to have been able to invent arrangements, which nature herself has not scorned to employ in the production of her wonderful works! The same sort of triumph is apparent when we refer to the construction of optical instruments and compare them with the eye.

Having made these observations with respect to the influence of physical agencies on life, we come next to what is of more importance, the physiology of man. Let us, in the first place, consider man generally, as to his form, growth, age, and position in the scale of animal creation, and afterwards specially and with reference to his peculiar habits.

When we examine the form of man and compare it with that of other animals, we observe in him this striking and characteristic peculiarity, by which he is distinguished from all the other mammalia, namely, that among the whole class he is the only biped. Of all the mammalia man alone walks on two limbs, a posture attended with incalculable advantages, by allowing the free and full use of his upper extremities in the various and complicated operations of prehension and manipulation. A brief examination of the structure of the human skeleton, and a comparison made between it and those of quadrupeds and monkeys, will be sufficient to show that bipedal progression is in man the result of structure and not of education, and that man alone, of all the mammalia, is destined to walk on two extremities. This point has been well discussed by Mr. Lawrence, in his excellent treatise upon the Natural History of Man, a work of the deepest interest and abounding in the most valuable information. The position of the foramen magnum in the human skull, compared with that observed in others of the mammalia, the relative obliquity of the plane by means of which its articulation with the spine is effected, the size and aspect of the pelvis, and the manner in which the latter is related to the longitudinal axis of the lower extremities, are all calculated to enable man, and man alone of the mammalia, to stand erect and use biped progression. Man and monkeys are the only animals which assume the sitting position, if we except some species of squirrel, the kangaroo, &c., &c. This position enables us to use the upper extremities while the remainder of the body is at rest, and combined with the advantageous structure of his hand, and particularly of the thumb, it gives to man a remarkable pre-eminence as a mechanical animal.

Too much stress has been laid, in my opinion, upon the proud upright position of man, and a great deal has been said and written concerning the sublime aspect of his countenance, and the god-like dignity of his carriage. A moment's consideration will be sufficient to show, that, though he looks upwards with ease and facility, he cannot, in this respect, claim any superiority. The eagle, which gazes on the sun with undazzled eye, and makes his pathway among the clouds, yields not in dignity of appearance or power of locomotion to man, though biped man merely crawls upon the ground. Can he measure his beauty with the antelope, his speed with the horse, or his strength with the elephant? It is in virtue of his intellect, of his reason, and not of his bodily form, that he ranks above his fellows. It was in mind not in body that "God made man in his own image."

Besides his peculiarity as being the only true biped among the mammalia, man is distinguished from all other animals (even those which approach nearest to him, as the ouran outang and various tribes of monkeys) by the form of his skull, as I shall explain more fully when we come to speak of the nervous system. In man the size of the brain is very remarkable. I do not mean to assert, that in him the brain is comparatively weightier than in any other animal, but, in the development of that part of it which is considered to be the exclusive seat of the intellectual faculties, the cerebrum, man exceeds all others. Throughout the whole class of mammalia the cerebrum is more or less imperfectly developed, and the cerebellum, which is chiefly connected with the faculty of voluntary motion, preponderates. The cerebellum, spinal cord, and nerves instrumental to the performance of voluntary motion, are much more developed in other animals than in man, but here the superiority of nervous organisation stops; the cerebrum diminishes in size, and is less complicated in the number and arrangement of its parts.

It would appear that in no other animal is the development of the intellect so slow or so wonderfully regulated as in man. In the child and infant there are but few faculties of the mind perfect, but these are for that very reason the more undividedly applied. If you examine the intellect of a child, and trace it through its progessive steps towards maturity, you will find in the order it observes something very wise and well adapted to promote the acquisition of knowledge. In the child we find the head larger in proportion than in the adult, the forehead more prominent, and the anterior portion of the brain well developed. This is a wise provision of nature, for the time in which most knowledge is acquired is during the first twelve months. At this period the child learns more than at any other; he is now making himself acquainted with the various objects of the physical world, and for this purpose it is necessary that all

the faculties connected with perception should be energetic. A quick and retentive memory, particularly for names and things, an attentive observation of every thing passing round him, and an ardent curiosity to obtain knowledge, are peculiar to the child. His imagination also is easily excited, and the warmth of his affections (though these can scarcely be said to be connected with cerebral development), produces a strong tendency to form attachments at this period, and hence it is that the child is so endearing.

With regard to the faculties of growing man, there can be no doubt that those which are most useful and best adapted for the acquisition of knowledge are first developed. In considering the successive additions made to the nervous system during fœtal life, and reflecting upon the progress of intellect from its dawn to its maturity, it has often struck me, that if we were better acquainted with the comparative development of the brain at each successive period from infancy to puberty, we should arrive at a series of curious and important facts. If casts were taken every year of the growth of the brain, and afterwards a comparative estimate made of the intellectual character at each of these periods, I feel confident that it would furnish some interesting materials calculated to throw additional light on the history of the human mind. But, on the other hand, it is evident, as every one who has studied the mind of man must have observed, that the intellect does not *march* or proceed at a steady and uniform pace. Man generally exhibits very considerable variety in the rate of his intellectual advancement, and the ordinary progress of mind is checquered by the occasional occurrence of periods during which the mental powers appear to remain long stationary, alternating with epochs of sudden improvement. The boy who at twelve or thirteen years of age is desired to read mathematics, will, perhaps, at first find it totally impossible to comprehend the simplest problems, though he manifests sufficient capacity in other matters; yet this same individual, in the course of time, may suddenly acquire what appears a new power of intellect, by which he is enabled to get these studies within the range of his understanding, and make a rapid and successful progress. Inattention to this circumstance on the part of those to whom the education of children is entrusted, has led to the most pernicious errors. Teachers have too often laboured at the cultivation of faculties which the child has not yet attained, and the result of such ill-directed efforts has been to disgust the mind with subjects where difficulty appears, and, at the time, actually is insurmountable. In neither body nor mind is the child a model, on the small scale, of the future adult; he cannot become a man intellectually or corporeally by mere increase, for the growth of both mind and body is always attended with the development of new organs and faculties.

With respect to the senses in the infant, we find that the sense of smell is but little developed. The sense of smell, like that of taste, seems to be placed by nature as a guard or sentinel over the digestive tube, to warn the individual of the fitness or unfitness of the matters to be swallowed. In the infant, where the nature of the ingesta is generally regulated by the mother, the sense of smell seems to be scarcely required, and hence we find it more or less imperfect, and the nose very small. We have also reason to believe, from the small size of the mouth, that the sense of taste at this period is by no means acute; in fact, these two senses appear to be developed in a similar proportion. But when we come to examine the senses of sight, hearing, and touch, we find a very remarkable difference. The infant comes into the world with the eyes, ears, and touch fully formed for use. These are the three senses which subserve to the acquisition of knowledge, and it was necessary that they should be well developed; the utility of the others being chiefly of a corporeal nature does not call for the same precocious expansion. With respect to hearing and touch in the infant, there is no peculiarity deserving of notice; but it is a curious fact that all children are short-sighted. You can easily perceive this by observing children when they are looking at a book or picture. Whether this arises from the greater convexity of the eye at that age I cannot exactly say, but I am inclined to think that this is the principal cause. You will, however, always observe children keeping their eyes very close to a book; and I do not recollect that I have ever seen a child that did not see more clearly at the distance of an inch or two less than the adult.

Having made these few remarks on the senses in the infant, I would beg leave to call your attention to one of the most curious circumstances connected with the physiological history of man,—his early tendency to form sounds. That man is by nature and physical conformation a speaking animal, is sufficiently obvious to any one who observes attentively the habits of infantile life. Long before the power of uttering articulate sounds is acquired, the infant is indefatigable in exercising and educating its vocal organs, and many months of preparatory practice are spent in crowing and in the utterance of half articulate sounds, to enable the organs of voice to become gradually accustomed to the finer and more complex movements employed in speaking. Nature has impressed on man an irresistible tendency to acquire the faculty of speech, and hence the exercise and education of the vocal organs commence with the dawn of infantile existence.

Much has been written about the impossibility of inventing language, and the discovery of a means of communicating his thoughts by articulate sounds, one of his noblest prerogatives, has been denied to the ingenuity of

man. I have already stated that the principal part of our knowledge is the result of those advantages which language and the art of writing bestow, and that language, written and spoken, is the mighty instrument which has enabled man to extend the sphere of mental exertion from the narrow limits of individual minds to the collective intellect of the species. But it has been asserted that man cannot invent languages. This does not appear to me to be the truth. Man is by nature a speaking animal; and I will venture to say, that if all the languages at present spoken in the world were annihilated, we should, in the course of twenty or thirty years, have a thousand new languages, not of course so cultivated and expressive as the present European and Oriental languages, but perhaps sufficiently intelligible for the ordinary intercourse of mankind. If we commence with the most imperfect of languages—the African, which consists of a few guttural sounds, we shall find that the invention of such a language requires no extraordinary stretch of human ingenuity; and as there are between these rude and infant tongues and the most perfect, as the Greek, Latin, &c., several hundred intermediate ones of various degrees of perfection, according to the circumstances in which the different tribes of mankind have been placed, it may be very fairly asked, where does the impossibility of invention commence? In Africa there are more than a hundred different languages without any analogy, though there are two or three which are more extensively diffused. In fact, such is the facility of inventing new sounds significant of idea, that language, if not checked by writing, would go on perpetually changing. In Africa, where there have been no revered and illustrious authors to leave the stamp of their genius on the language, and give it a fixed standard, we find it changing from generation to generation. We could scarcely understand the language spoken in the time of Chaucer, but an African would be often unintelligible to his grandchild. In fact, the formation of languages is constantly going on; it is a kind of natural instinct, and it is from the impulse of this instinct, that almost every man has a tendency to coin words. Written authority now struggles against the changes which are taking place, and the efforts of the learned are directed to retain cultivated languages in their present state, and hence it is that new words invented to express common ideas seldom outlive their authors *. When languages have arrived at a certain degree of perfection, it is wisdom to retain them in that state, and resist the progress of useless innovations. The propensity to invent words has been in some instances rather a bane than an advantage to science, as we see exemplified in the confusion and obscurity consequent on numerous and often useless changes in scientific terminology.

As some languages are extended by conquest, intercourse, and commerce over several nations of the same continent, so at different times do we find that certain languages have tinctured others, even in distant parts of the earth. This circumstance has been attributed, but, in my opinion, too hastily, and without sufficient grounds, to their having a common origin *. I do not give much credit to the researches of those modern literati, who have expended so much labour in tracing the affinity of tongues, and I think they have committed a great physiological error in looking for a common origin of languages, whether in the east or elsewhere. I must refer to the *Foreign Quarterly Review* for an able exposition of the principle that a great many languages may have borrowed a considerable number of words from the language of some country dominant, on account of conquest or commerce, without, however, the languages of any of these countries being therefore derived from it. That several European languages have words evidently of a Sanscrit origin no more proves these languages themselves to be of a Sanscrit stock, than the fact of the number of Latin and Greek terms each now possesses ought to prove to an observer (ignorant of the precise period when these words were introduced), that these languages are of a Latin or Greek stock.

The strongest proof that we are not to look for a common origin of languages, may be derived from the fact mentioned by Mr. Lawrence in his Lectures on Physiology, p. 406, *that a number of perfectly distinct languages have been, and are still, spoken by tribes of the same race, within a comparatively small space of country.* Thus, in the kingdom of Mexico, Mr. Jefferson states that more than twenty languages are spoken, most of which are at least as different as the Greek and the German, the French and the Polish. On the continent of America alone, where so little diversity of race exists, more than four hundred languages existed. "In Hindostan there are probably not lesss than forty distinct languages, yet the great mass of the people use but eight, the remaining inhabitants (a mere fraction, and consisting of the rudest of the

* D'Israeli has made some curious and pertinent remarks on this subject.

* Since this lecture was delivered in November last, an able article on this very subject has appeared in the number of the *Foreign Quarterly Review* published in December, 1834. I can scarcely express the gratification I experienced at finding a coincidence, not merely of opinion, *but almost of words*, between myself and the author of the able article on the Countries, Nations, and Languages of the Oceanic Region. I need hardly add, that I have drawn some additional facts in support of my views from this source, while engaged in correcting this lecture for the press.

whole) having more than thirty languages among them.

Mr. Marsden gives a list of eighty-four different languages spoked in the oceanic region, a list, certainly, by no means complete, for the *Review* to which I have referred says, "We have in our possession several tolerably complete vocabularies not even named by Mr. Marsden, besides notices of no less than forty-six languages spoken by as many distinct nations or tribes to be found in one corner of the island of Borneo alone, that comprising its northern boundary. A few of these tribes are partially converted to the Mohammedan religion, and have made some progress in the arts, but the greater number are in a very savage state. Every village and every district is a distinct nation, having a separate language not understood by its neighbours *."

The structnre of the languages spoken over the immense countries of Thibet, Ava, Pegu, Siam, and China, where the natives are of the Mongolian variety of mankind, exhibits to us the very infancy of languages. We have here an opportunity of studying them in their commencement, for all are monosyllabic, and consisting of the most simple elements. "As the earliest efforts of the infant are merely sounds of one syllable, so the first adult children of nature stammered out their meaning in the same way. The people of these countries go on speaking without any separation of ideas into certain classes, such as produce the distinctinction of the parts of speech, as in the more perfectly formed languages. One and the same sound signifies joyful, joy, and to rejoice, and that through all persons, numbers, and tenses."

"The more radical ideas are set down together, and the hearer is left to guess at the connecting link. As there are no inflexions, the cases and numbers are either not noted, or they are marked under urgent circumstances by circumlocution. They form plurals as children do, either by a repetition of the word, as tree tree, or by adding the words much or other, as tree much, tree other, I much, I other, which means we, 'Be heaven I other Father who,' is their mode of expressing 'Our Father which art in heaven.'

"That languages of such poverty, which merely place together the most essential ideas without connecting them, must open a wide field for ambiguity and obscurity in civil life, and be totally inapplicable to the purposes of science, is sufficiently obvious. Hence the people who speak them must ever remain children in science. However the Chinese may exert themselves, so long as they are impeded by this imperfect language, they must be unable to appropriate to themselves the sciences and arts of Europe †."

"It is a curious fact that the Mongols, the Calmucs, and the Burats, although they have at all times occupied the regions close to Thibet, and have obviously derived their language from the same quarter, are no longer confined to such an imperfect instrument of thought and communication as a monosyllabic language affords. They have (and here we observe language advancing a very considerable step) derivations and inflexions both for nouns, and for expressing moods and tenses. The Japanese, too, another numerous people of Mongolian formation, have a well-formed polysyllabic language, without any resemblance to the Chinese."

Here we find perfectly different types of languages, monosyllabic without, and polysyllabic with, inflexions, prevailing among nations evidently derived from a common stock. Now it is plain that the languages of the Calmucs and Mongols, &c., must have been formed at a date subsequent to their branching off from the parent stock, and if this be the case (which I think cannot be fairly denied) it furnishes a strong proof of the facility with which nations invent languages, and of the difficulty with which a radical fault committed by the first inventors is surmounted by their descendants.

That there exists in mankind an innate tendency to adopt the same expedients in overcoming the same difficulties connected with language, is obvious from the fact that almost all nations have fallen on the same natural method of counting and of naming numbers. "There can be no doubt that the decimal notation, which has been in use in almost every age and country, has arisen from the facility which the ten fingers afford of making calculations. The names of numbers have been universally formed distinct as far as ten, after which compound names have been employed. The exceptions to this rule are only additional proofs of the universality of the principle, they being generally deduced from five, the number of the fingers, and from twenty the number of the fingers and toes together. We call the simple symbols of a number digits, or fingers. The Carribees called the number ten by a phrase which meant all the fingers of the hand, and, in many languages, the words for five, ten, or twenty, are connected either by direct derivation, or by common etymology, with those for the hand or fingers. In France the scale from 60 to 100 is vicenary, by twenties, and, in the Indian Archipelago, the ancient scales are vicenary *.

Mr. Peacock, from whom the above extract is taken, seems to have successfully established two propositions,—1st, that the natural scale of notation alone has met with adoption, meaning by natural scales those which are derived from the hands, or hands and feet together; 2ndly, that amongst all nations practical methods of numeration have preceded

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* Vide *Foreign Quarterly Review.*

† Adeling's Mithridates, as quoted by Mr. Lawrence.

* Article Arithmetic, in the Encyclopædia Metropolitana.

the formation of numerical language. But this does not imply that every nation has gone high in the scale of numbers. There are tribes which have never even risen to making up large numbers by the repetition of fives. Aristotle mentions a tribe of Thracians, who never counted higher than four, and the Yaneos, living on the banks of the river Amazon, have been stopped by the complexity of their language from even ascending so high. They count no higher than three, the name for which in their language, according to La Condamine, is poettarrarorincoarroac, which consists of twenty-two letters.

I regret that my space will not allow me to quote some other very interesting and curious remarks of Mr. Peacock's on this subject. There can be no doubt that the simple and natural scale of enumeration by decimals has been derived from the habit of reckoning by the fingers. This, combined with the Arabic notation (one of the most important of human inventions), has materially assisted the advancement of human discoveries in various departments of science, by affording a simple and efficient mode of calculation.

I have thus, gentlemen, endeavoured to prove that man is by instinct and physical conformation an inventor of articulate sounds to serve for the expression of his ideas, and that he is fully capable of inventing languages; in fact, that his tendency to form new words is so great, that, where it is not counteracted by a written standard, languages have completely changed in the course of a few generations.

When a language has become consecrated by being used for the purpose of disseminating the knowledge of a certain religious code, as is the case with the Hebrew and Arabic, the reverence attached, by those who consider that code as sacred to the laws themselves, is extended to the language used, and thus a powerful check on the natural tendency of languages to change is at once brought into operation. Again, when a wise system of laws has been gradually disseminated, or when the works of favourite poets and historians have obtained a well deserved celebrity in any nation, then the tendency to change receives a check as was the case with the Greeks and Romans. A convincing proof that the invention of languages can be achieved at the expense of no great intellectual effort, may be derived from the fact, "that languages are many when people are savage and rude, or semi-barbarous. In proportion as men become civilised, and communities more extensive, they become few in number, the smaller and ruder dialects being gradually absorbed or violently exterminated by the prevalence of the more polite, improved, and consequently the more useful. We are unaware of the existence in ancient or modern times of any one language, widely disseminated and extensively spoken by many rude tribes, disconnected by locality, and without the knowledge of letters. The Celtic language is indeed said to have been spoken universally in Spain, Gaul, and the British islands, and the German language equally so from the Rhine to the Baltic; but of this there is no proof, and we are disposed to dispute a fact which is contrary to all authentic analogy in other parts of the world. In China, as Du Halde observes, every province, every great city, nay, every town, has its peculiar dialect, which is the reigning language, for every body speaks it, the learned, as well as the common people and the women; but then the women and common people can talk no other." * * * * * *

"In Europe we see the most civilised and numerous communities speaking one language, as the German, the Italian, the French, the Spanish, &c., while many tongues occur when we enter the barbarous parts of it, Russia and Turkey. In France and in the British Isles the rude Celtic, to the great benefit of society, is in progress of extinction, and even the Anglo-Saxon dialect of the Scotch is rapidly giving way to the more polished and useful English. In America, before the Spanish conquest, there existed but two or three tolerably polished languages, each of them spoken by a pretty numerous population. In that continent, although several have disappeared, it is known that there are still spoken upwards of four hundred distinct languages, with no less than two thousand dialects by the indigenous population, who at the utmost are not reckoned above ten millions in number, whilst the Anglo-Americans, who speak but one language, are themselves alone more numerous *."

You will, I think, grant, gentlemen, that the facts brought forward afford a most convincing proof that man possesses an innate tendency to use, and a physiological aptitude to invent, languages, and that under every variety and circumstance of race, climate, and civilisation, he invents them with facility and in endless numbers; for since the first syllable issued from the mouth of the first man who spoke, how many thousands of dialects, of languages, have been invented and lost! This great physiological principle being established upon a sure and firm basis, it must exert a beneficial influence in directing and limiting the researches of the philologist, for it will teach him how far he may expect to elucidate history by inquiries into the affinity and origin of languages, and it will prevent him from wasting his time and labour in the vain endeavour to trace the different tongues used by mankind to one common source.

To conclude, it may be observed that a multitude of languages is a serious evil, and is calculated powerfully to counteract the diffusion of knowledge; it is an evil, however, which will diminish with each succeeding century, for, luckily for mankind, the dis-

* *Foreign Quarterly*, No. 28, p. 388.

covery of the New World and Australia has secured a vast extent of territory, into which a few of the polished languages of Europe have been transplanted, and where they flourish without a rival. If the time ever arrives, which there seems no reason to doubt, when the continent of North America and the great island of New Holland are as thickly inhabited as Europe, then what advantages to commerce, to science, and to the arts, will arise from one, and only one, language being spoken by the inhabitants of those mighty and distant countries!

These advantages we are scarcely even able to appreciate in the Old World, It will be reserved for the New to witness in after ages this great and interesting spectacle*.

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* In this and the preceding lecture I have spoken of the electrical theory of nervous influence; though the validity of the following objection to this theory may be questioned, yet I think it right to bring it forward here, for the purpose of exciting further discussion. The passage quoted is taken from a memoir by Professor Wulzer, of Bonn, translated in the last (18th) number of the *Dublin Journal of Medical and Chemical Science.*

"A phenomenon much more difficult of explanation is presented in the fact, that the motor and sensitive nerves, having arisen separately from the spinal marrow, soon after their origin are placed in immediate apposition, and by a continued decussation of their finest fibrils enter into most intimate connexion; yet, notwithstanding this, by cutting across the posterior or the anterior roots of the spinal nerves, sensation or motion can be abolished at will. The correctness of this fact has been decidedly ascertained; the experiments which Professor Mueller had the goodness to repeat in my presence, upon frogs, leave no doubt upon my mind with regard to it. Also, since I can, by my own experiments, confirm the observations of Fontana, Prevost, Dumas, Ehrenberg, and J. Mueller, that no where a perfect anastomosis of the substance of the nervous fibrils can be ascertained, but only its immediate apposition can be demonstrated, the question still remains, how, whilst the most intimate contact of the parts of both systems of nerves is preserved, can the separate operation of each be explained? The pleasing comparison of nervous agency with the operations of electricity, which as long as each separate cord of the spinal system of nerves might be reckoned as simultaneously the conductor of sensation and motion, had much in its favour, from this receives a severe blow; for what physician (natural philosopher, *physiker,*) would have it in his power to explain the separate agency of two conductors which stand in the most intimate connexion with one another by means of conducting wires? I am of opinion, that the cellular tissue which lies between the separate cords effects this remarkable isolation of agencies, in somewhat of the same manner, as, by means of cellular substance, the separate layers of the intestinal parietes are so separated from one another, that they mutually do not disturb one another in their functions, but that even pathological processes pass with difficulty from one to another. At all events a wide field remains for further investigation with respect to this subject."

LECTURES
ON
MIDWIFERY & THE DISEASES OF WOMEN AND CHILDREN,

BY EDWARD RIGBY, M.D., F.L.S.,
ASSISTANT PHYSICIAN-ACCOUCHEUR TO THE GENERAL LYING-IN HOSPITAL.

Delivered at St. Thomas's Hospital.

LECTURE XIV.

Fœtal Circulation—Signs of Pregnancy.

Gentlemen,—The circulation in the fœtal state presents several peculiarities which distinguish it remarkably from that of a child after birth. Surrounded by the liquor amnii, the fœtus does not respire; its lungs have as yet been unemployed, therefore they are small and collapsed, and present a firm, solid mass, nearly resembling liver in appearance. In this state but little blood from the pulmonary arteries can circulate through them; for as the extreme ramifications of these vessels are distributed upon the mucous membrane lining the bronchi and air cells, the free passage of blood through them will in a great measure depend upon a pervious state of the air cells. The pulmonary arteries in the fœtal state are therefore small, and transmit but a small quantity of blood into their numerous ramifications, just sufficient to keep pervious these vessels, which, after birth, are to be so greatly distended; in this state the lungs when thrown into water sink. Hence, as the pulmonary arteries do not afford a sufficiently free exit to the contents of the right side of the fœtal heart, nature has provided it with a peculiar means for carrying off the overplus quantity of blood which is poured into the right auricle from the vena cava. This is attained, firstly, by the *foramen ovale*, an oval-shaped perforation in the septum, between the right and left auricles, and furnished with a semilunar valvular flap, so constructed as to allow a free passage for the blood from the right to the left auricle, but not in the contrary direction (*plates and preparations*). By this means a considerable quantity of blood will be transmitted at once from the right to the left auricle, and consequently much less into the right ventricle and pulmonary artery. Still, however, more blood passes into the right ventricle than the pulmonary artery, in the collapsed state of the fœtal lungs, is capable of

conveying away. The pulmonary artery is therefore continued beyond its bifurcation into the aorta, at its curvature, by means of a short thick passage called the *ductus arteriosus*, and in this way is the right ventricle enabled to get rid of its overplus quantity of blood; thus we see that the fœtal heart, although consisting of two auricles and two ventricles, performs merely the functions of a single heart; both ventricles assist simultaneously in propelling the same column of blood, namely, that of the aorta, and thus enable the heart, in this weak state, to act with considerable power.

The chief part of the blood which flows through the iliac arteries of the fœtus, instead of being sent to the inferior extremities, is carried into the umbilical arteries, which, passing up along the sides of the bladder, meet the umbilical vein at the navel, and with it form the vessels of the umbilical cord. These two arteries carry the blood of the fœtus into the placenta, where, having undergone certain changes apparently analogous to those produced by respiration in the adult, it is returned by the umbilical vein. This vessel, which afterwards forms the round ligament, passes through the umbilicus along the anterior edge of the suspensory ligament of the liver, and, having given off branches to the right and left lobes, passes at once by a short passage, called *canalis venosus*, into the vena cava.

Thus, gentlemen, you see that the peculiarities of the fœtal circulation may be considered as four, viz: the *foramen ovale*, or passage from the right into the left auricle; the *ductus arteriosus*, or communication from the bifurcation of the pulmonary artery into the arch of the aorta; the *umbilical arteries*, arising from the iliac arteries, and carrying the blood along the cord into the placenta; and, lastly, the *canalis venosus*, or passage between the umbilical vein and vena cava.

Let us now examine the changes which take place in the fœtal circulation at the moment of child-birth. The child, which had hitherto been immersed in the bland and warm medium of the liquor amnii, is at once exposed to the action of the external air. By means of the sympathy existing between the skin and respiratory nerves, sudden and convulsive efforts at inspiration take place; the air cells of the lungs become partially inflated; and, after a short time, as the respiration increases in power and activity, become distended throughout their whole extent. The thorax rises, the flaccid diaphragm, which hitherto had been pushed up by the large fœtal liver, now contracts, pressing down the liver into its natural situation. The lungs, from being a hard, solid, heavy substance resembling liver, at once become inflated, elastic, and crepitous; they are light, and permeable to air in every part. The capillary terminations of the pulmonary artery, which ramify in the mucous membrane which forms the parietes of the air cells, and which hitherto had been firmly compressed by the collapsed state of the fœtal lungs, are suddenly rendered pervious throughout their whole extent. By this means a vacuum, as it were, is formed in the ramifications of the pulmonary artery; each inspiration is accompanied by a rush of blood from the right ventricle of the heart into the newly inflated structure. What is the result? The pulmonary artery at its bifurcation swells and becomes turgid; the blood is carried off into its numerous ramifications as fast as the right ventricle can supply it. This you will easily understand from the fact, that the area of two arteries is greater by one-half than that of the trunk from which they bifurcated. From this state of distension, the distance between the pulmonary artery and aorta is increased; the ductus arteriosus, which has now become empty, is stretched, and thus partially closed; the right auricle, which, but for the foramen ovale, could not have cleared itself of the whole quantity of blood which was poured into it by the vena cava, is now enabled to transmit its entire contents into the right ventricle. The left auricle, which before was supplied only by the foramen ovale from the right auricle, is now rapidly filled by the blood brought into it from the four pulmonary veins. The equilibrium between the two auricles becomes altered; the right, which had hitherto been somewhat gorged with blood, is now able to clear itself with facility; whereas the left, which was but partially supplied, is now distended with a much greater quantity; there is now rather a disposition for the blood to regurgitate from the left to the right auricle; this, however, is prevented, by the semilunar fold of the foramen ovale, which now acts as a valve, and generally becomes firmly attached to the septum. The obliteration of the canalis venosus at the posterior margin of the liver, and of the umbilical vein at the anterior edge, may, I think, be explained by the changes which necessarily follow the inflation of the lungs; the diaphragm, as I before stated, pulls down the liver into its natural situation; the distance, therefore, between the liver and the heart is increased, and the canalis venosus is consequently stretched and considerably pressed upon, and precisely the same results will follow with the umbilical vein.

I shall not detain you any further upon this subject than to enumerate to you some of the more important dimensions of a full grown fœtus; for, without an accurate knowledge of the exact proportion which the different parts bear to the maternal passages, you cannot possibly form a correct opinion as to the ease or difficulty with which they will pass. In forceps cases, in turning, and many other obstetric operations, this knowledge is very essential, and, indeed, is the only guide by which you can direct your progress.

The principal diameters of the fœtal head are four, viz. *the transverse diameter*, from one parietal protuberance to the other, this

measures three inches and a half; *the perpendicular diameter*, from the vertex to the foramen magnum, also three inches and a half; *long diameter*, from the occiput to the root of the nose, four inches and a half; and *the great diameter*, extending from the occiput to the point of the chin, which is five inches. The transverse diameter of the chest is about four inches, its antero-posterior about two inches and a half; the greatest width of the hips is four inches. The child usually lies with its long axis corresponding to the axis of the superior aperture of the pelvis, the chin upon the breast, the legs bent forward upon the abdomen, the whole child forming an egg-shaped mass.

This concludes the physiological part of my midwifery lectures. You are now, gentlemen, capable of entering upon the practical details. I shall, therefore, commence this subject by enumerating to you the various changes and effects which pregnancy produces in the system, and then point out to you those symptoms by which it may be known with certainty.

I know of no signs by which we can ascertain that *conception* has taken place, nor shall I attempt to enumerate any of the many symptoms which have been said by various authors to denote the occurrence of this change, as they only tend to puzzle and mislead.

The diagnosis of pregnancy in the earlier months is also extremely difficult and obscure, nor do we possess any means by which we are enabled to ascertain its existence with any degree of certainty. The effect which it has upon the vascular system is very great, and many remarkable changes in the constitution take place at this time, which, when taken conjointly, will generally enable the practitioner to form a tolerably accurate diagnosis, although at this period there are no symptoms by which we may with certainty pronounce the patient to be with child. The changes which are observed to take place in the system during pregnancy may, I think, be advantageously classed under the five following heads.

Firstly.—Symptoms of an altered condition of *the brain and nervous system* during pregnancy, such as increased susceptibility and irritability of the whole body. The temper becomes changed, she is disposed to give way to anger or tears; she feels unusually low-spirited and anxious, or is in the other extreme; she is liable to spasmodic affections, faintings, &c.; to occasional chilliness or flushings of heat; there is a general feeling of uneasiness, debility, &c.

Secondly.—Symptoms denoting a change in *the circulating system* during pregnancy, they are those of plethora; the blood presents the same appearances as in a state of inflammation, and when drawn shows the buffy coat; the quantity of blood also is considerably increased, hence those headachs, toothachs, palpitations, anxious breathings, &c., from which women so frequently suffer at this time; the pulse is quicker, fuller, and stronger, more particularly at what would, in the unimpregnated state, have been the menstrual periods; the vagina becomes more vascular and warm, secreting more mucus, a discharge which sometimes passes into actual leucorrhœa; this, however, only lasts with pregnancy.

Thirdly.—Symptoms of *gastric derangement*, for instance, nausea, inclination to vomit, or actual vomiting, especially in the morning; peculiar antipathy for certain articles of food and drink, and longing for others, and, occasionally, for things which, at other times, would excite disgust; increased secretion of saliva in the mouth, heartburn, and the bowels more than usually costive or relaxed. The digestion is frequently much altered, women who otherwise have very small appetites now become remarkably hearty and eat largely, and I have known of cases of long standing chronic dyspepsy, where almost everything disagreed with the stomach, and where the greatest caution as to diet was necessary, that now had not only an excellent appetite, but could digest almost anything.

Fourthly.—*Changes in the appearance of the Skin—Change of Colour.* Women who are naturally pale have now a colour in the face, and those whose usual complexion is florid, become pale, ash-coloured, and very plain; the features are sometimes remarkably changed; there is a dark ring under the eyes, mole spots become larger and darker; an eruption frequently appears about the nose and forehead, and the cutaneous perspiration has a peculiarly sour smell.

Fifthly.—The *Secretion of Urine* is sometimes increased; the urine is sometimes of a high colour; there are frequent calls to make water, which is passed with some difficulty.

Morning Sickness is frequently one of the most troublesome and annoying affections to which women are exposed during pregnancy; it is, however, seldom dangerous, and, where it does not materially impair the general health, is to be regarded as a favourable sign, as it tends to prevent the formation of too much blood, which is the chief cause of abortion. Morning sickness has been considered as a symptom of pregnancy, but, when taken by itself, it cannot be depended upon, since various affections of the stomach will produce similar symptoms without the presence of pregnancy. It seldom lasts beyond the third month, although we occasionally see it continue throughout the whole term of utero-gestation. Various reasons have been assigned as causes of this affection, such as the pressure of the uterus upon the stomach or the intestines, producing an antiperistaltic motion in them, which causes vomiting, but this cannot be the case at so early a period, when the development of the uterus is comparatively small. Mauricean, so early as 1668, showed that the vomiting in pregnancy was the result of the sympathy between the stomach and the womb, produced by the nerves which are distributed about the orifice of the stomach com-

municating with those which pass to the womb. The same opinion has been held by Dionis, and especially noticed by Smellie, whose own words I will read to you. "It has been supposed that the uterus being stretched by the increase of the ovum, a tension of the part ensues, affecting the nerves of that viscus, especially those which arise from the sympathetic maximi, and communicate with the plexus at the mouth of the stomach: it lasts generally to the end of the fourth month." The costiveness, flatulence, colicky pains, and, in weak systems, diarrhœa, when in the first half of pregnancy, arise from the same cause. When it is severe it may be relieved by small bleedings, open bowels, and proper regimen, but seldom by tonics or cordials; opiates and fermenting liquors are prejudicial during pregnancy, as they impair the digestion. In epileptic cases, however, venesection must be employed with considerable caution, and we must be careful not to extract a large quantity suddenly; the operation must be performed in the horizontal posture, and a moderate quantity slowly taken. Narcotics, says Mr. Burns, are of no use, attention to the bowels is of main importance; not unfrequently complete relief will be obtained by the action of a dose of Epsom salts, while the severity of the vomiting may be relieved by effervescing draughts. Inefficient doses, says that author, are injurious, as, by producing only irritation, they increase the sympathetic affections of the head, such as pain, drowsiness, giddiness, &c.

Heartburn is another distressing modification of the irritation produced by the sympathy between the stomach and impregnated uterus, which frequently resists our utmost endeavours to relieve. Magnesia has been almost universally employed in this complaint, but, though sanctioned by long custom and high authority, I cannot consider myself justified in recommending it; the acids which it neutralises are chiefly, if not entirely, the muriatic and acetic, and, although it may produce temporary relief by removing them, their presence is substituted by the bitter septic magnesian salts, which cannot fail to exert a highly injurious action upon the tone of a stomach already more or less deranged. Of this you may easily convince yourselves by examining the fluid which has been vomited by the patient. You will not only find it strongly acid, but, by adding a little solution of nitrate of silver, will obtain a copious precipitate of the muriate. There are, perhaps, few medicines, the use of which has been more abused than that of magnesia, the relief obtained is but short, and the dose is therefore frequently repeated, to the great injury of the digestive organs. It is scarcely credible to what an extent the use of antacids may be carried to relieve the cardialgia of pregnancy. Dr. Dewees mentions having attended a lady with several children, "who was in the constant habit of eating chalk during the whole term of pregnancy. She used it in such excessive quantities as almost rendered the bowels useless. We have known her many times not to have an evacuation for ten or twelve days together, and then only procured by enemata, and the stools were literally nothing but chalk. Her calculation, we well remember, was three half pecks for each pregnancy. She became as white nearly as the substance itself; and it eventually destroyed her by deranging her stomach so much that it would retain nothing whatever upon it;" nor does the magnesia always afford that relief which is expected, for (as Dr. Dewees observes) "such is the prevalence of acid that none of the antacids are capable of overcoming it, though administered with a liberal, or even daring, hand. We rarely persevere in the use of alkaline remedies, when we find that considerable doses will scarcely have a temporary effect; when this is the case we have recourse to acids themselves for the relief of this most distressing state of stomach." Both vegetables and minerals have been employed by us with about perhaps equal success, but the vegetable will merit the preference in general, on account of the teeth. "We have in several instances (says Dr. D.) confined patients for days together on lemon and water, with the most decided advantage; we have repeatedly found much benefit from the use of spirit of turpentine, three or four times a-day, in twenty drop doses; this medicine is very easily taken if it be mixed with a little cold sweetened water. When the system is not excited to febrile excitement, and where the stomach rejects every thing as soon as swallowed, we have often known a tablespoonful of clove tea act most promptly and successfully." Pregnancy also exerts a great influence upon the nervous system, and produces a multitude of hysteric and nervous symptoms, which are very annoying to the patient, and not less so to the practitioner; severe toothach is an affection of this sort, nor can we look for obtaining relief by extraction, for we should not only fail of success, but, according to Mr. Burns, should run a considerable risk of exciting abortion; on the other hand, where the toothach is severe, attempts must be made to alleviate it, for if allowed to go on it is liable to produce the very effects we wish to avoid, hence the origin of sick headachs, and many hysterical and anomalous affections, and hence the valuable fact, that many excitements, arising from the state of the bowels or abdominal nerves, are from this direct influence on the vascular system best relieved by resorting to the lancet before acting on the original seat of the disease by purgatives, which would be too slow in their operation *. The peculiar longings for certain articles of food, &c., a depraved state of appetite for sour things, or for antacid absorbent earths, are also modifications; the disposition of the patient experiences a re-

* Burns.

markable change, those of a melancholic habit now become unusually cheerful, while those, who at other times enjoy good spirits, become peevish, fretful, and anxious.

Salivation is said to occur occasionally in early pregnancy, and sometimes to a very considerable extent, it is however by no means common. Dr. Dewees has described an interesting case, where the discharge was actually from one to three quarts daily, besides being harassed by excessive nausea and frequent vomitings; various remedies were successively tried but without relief, the complaint at last yielded to a completely animal diet, and small doses of laudanum, at the same time I should be inclined to say query, whether attention to the state of the bowels and vascular system would not have succeeded better than the gargles, blisters, and other local remedies which were employed; the extreme state of debility, which is described to have resulted, might possibly have been thus avoided.

Pruritus pudendi, to a very distressing degree, is occasionally observed to come on during pregnancy, and though, in most instances, a very manageable form of disease, yet if its nature be not properly understood it becomes exceedingly obstinate, and much suffering is the result. It appears to be essentially different from common prurigo, being an aphthous state of the lining membrane of the vagina, and of the skin, which covers the perinæum and external organs; there is great heat and redness of the parts, which are more or less swelled, and from the scratching, which the intense itching demands, the cuticle, where it has been raised by the pustules, becomes abraded, and severe excoriations, and, where there has not been sufficient attention to cleanliness, even ulcerations may be produced. The pustules on the external parts frequently attain a considerable size, being more distinct than in the vagina, which is usually encrusted with one mass of aphthæ, whereas, on the perinæum and margins of the labia, I have seen them as large as peas; these cases, for the most part, will be found to yield to constant washing the parts with tepid Goulard lotion, or solution of borax. It is to Dr. Dewees that we are indebted for the first correct description of this disease, and you will do well, gentlemen, to read over the valuable observations upon the diseases of pregnancy, which are contained in his compendious System of Midwifery. Where, however, the patient is plethoric, and the system in a considerable state of excitement from the irritation, a venesection with saline laxatives will greatly assist the action of the lotion, and in some cases will even require to be followed up by leeches to the part; in every case the bowels ought to be attended to, for a state of constipation will be found greatly to increase the inflammation of the part and the obstinacy of the disease. These various complaints generally disappear by the third or fourth month, especially the gastric affection, viz. the morning sickness, heartburn, &c., although we occasionally meet with cases where they continue to harass the patient through her whole pregnancy.

LECTURES
ON
FORENSIC MEDICINE,
DELIVERED BY
DR. HAY GRAHAM,
At the Westminster School of Medicine.

LECTURE XIII.

Insanity, or Diseases of the Mind.

Gentlemen,—That unknown power, which resides within us, and by means of which we think, is called the mind. It is this unknown power which, by the intervention of the organs of sense, takes cognisance of external objects, and thus becoming acquainted with the world that is without, creates for itself a world within. But as the instruments it makes use of are in themselves more or less imperfect, it necessarily follows that the knowledge it acquires must participate of the imperfection of those instruments. Hence it is that the mind, not having a just perception of things as they really exist, but seeing them darkly, as through a mist, even in a sane state, is often induced into error.

The gigantic genius of Aristotle compared the mind to a block of marble, which, though shapeless, yet contained within itself the principle of every form, requiring only the chisel of the sculptor to bring them forth. The man whose genius ranks, only as a metaphysician, next to Aristotle, our own great and immortal countryman, has compared the mind to a sheet of blank paper, on which every character may be traced. From hence it is inferred the mind possesses no innate ideas of its own, but acquires all its ideas from without. This truism has become an axiom, "nil est in intellectu, nisi fuit ante in sensu." The blind man can have no idea of colour, nor the deaf one of sound. The fœtus in its mother's womb differs not much from the state of a vegetable; and, as sensation is the origin of all ideas, it follows, that without sensation the mind could not exercise its faculties, which is exemplified in perfect sleep. Were it possible for a man to be so constituted as to live without sensation, his scale of existence would be inferior to that of an oyster, for he would not be conscious of it.

The mind and the soul are in some measure convertible terms. More correctly speaking, the mind may be said to be the attribute of that unknown incarnated substance, being in itself the power of thought, which consists of will, memory, and judgment. The brain is universally allowed to be the seat of the mind, and by the phrenologists is said to be the organ of thought. But you are not by tha

to understand that the brain thinks or secretes thought; an absurdity into which many half-witted half-taught persons have fallen. The soul sits, as it were, enthroned in the brain, and, by means of the organs of sense, takes cognisance of external objects, and holds dominion over the body. Thought cannot be said to be the property of the brain, any more than sight can be said to be the property of the eye, for the eye of itself sees nothing; but the eye is the organ or instrument of sight, and in a similar manner is the brain the organ of thought. The soul beholds external objects by means of the eye, and thinks, or exercises the functions of will, memory, and judgment, by means of the brain.

It is not for me, in a lecture on forensic medicine, to soar into the regions of meta-physics, or to interfere with any man's belief, or with his want of belief; but as our profession, and especially those embracing the doctrines of phrenology, have been accused of the want of belief in divine essence and abstract spirit, and as there are men who presumptuously deny their existence, I beg to point out to you, without having recourse to any of the usual arguments on either side, how very absurd, unscientific, and untenable is such an assertion. With as much reason might we deny the existence of matter as to deny the existence of spirit; for in truth we know no more of one than of the other. Our knowledge of matter is limited merely to those properties, whether inseparable, incidental, or accidental, which are submitted to the evidence of our senses. We know that matter has dimensions, that it may be fluid or solid, rough or smooth, with or without colour, and so forth; in addition to these, chemistry teaches us that it has many other properties, and, for aught we know, it may be possessed of many more of which we have not the most distant idea; yet, after all, these are only the properties of matter; but as for matter itself, what it consists of, its essence, we know absolutely nothing at all. Now, gentlemen, our knowledge of spirit is of precisely the same description; we know it by its properties, by its effects, but we know nothing at all about its essence. If we look into ourselves, or if we look around us, we must be convinced there is something more than meets the eye; there is a something which gives us the consciousness of existence, which is the source of life, the principle of organisation. Matter cannot secrete thought, it cannot organise itself. The very laws impressed upon it prove the existence of a thinking being which governs and directs the whole.

"Mens agitat molem et magno se corpore miscet."

This foolish scepticism, which some empty headed men indulge in, is a proof of great imbecility of judgment, and it has been truly said, that the sceptics of the present day would have been the fanatics of former ages; for it is as true now as it was in the days of Horace,—

"Dum vitant stulti vitia, in contraria currunt."

I should, therefore, gentlemen, wish you to avoid falling into such a ridiculous and egregious error, as denying the existence of spirit, but should any among you be inclined so to do, I would in that case recommend them not to confine their scepticisms to spirit, but also to extend it to matter, to adopt the doctrines of Pyrrho, the celebrated Greek philosopher, doctrines which still flourish in the East, and perhaps existed there long before the days of Pyrrho. According to these doctrines, we ought to doubt of all things. The universe is called by a name, meaning that which seems to be, but which is not; life is but a dream, our senses are imperfect, and our judgment fallacious. Hence, according to these philosophers, we ought not to believe in the evidence of our senses, but to suspend our judgment, to doubt of every thing, and carefully avoid arriving at any conclusion. Thus living in a world of shadows, if we happen to break our heads against what seems to be a wall, we ought not thence to conclude that our heads are really broken, or that we suffer any pain, since all is imaginary, and it is a doubtful point whether we have any heads to break. This, gentlemen, is a scepticism much superior to anything that has ever emanated from the lucubrations of modern writers, and being equally as rational, if not even more so, I beg to submit it to the consideration of those who are disposed to speculate on such a subject.

To be possessed of a *mens sana in corpore sano* has ever been esteemed the greatest blessing of life; but it seems to be the concomitant calamity of the proud prerogative of reason, that man of all animals is the only one subject to insanity.

A sound mind consists in judging correctly of those things that are of daily occurrence, and with which all men are familiar, and constitutes what is generally known by the name of common sense; a trifling deviation from this line of rectitude may arise from a greater or less degree of weakness of judgment or may cause eccentricity, but not produce insanity, for there are daily deviations to which all men are subject.

In point of law, insanity is applied to such as are incapable of managing their affairs or taking care of their property, rather than to those who act and talk extravagantly and incoherently, but manifest much shrewdness in the management of their affairs. In point of fact, few or none can be said to be altogether sane. "Nemo mortalis omnibus horis sapit." Yet both the medical and leading distinctions of insanity apply only to those strongly marked aberrations of judgment, impressed with a physical as well as a moral character, which are obvious to all men, and do not admit of a doubt. But, as these mental aberrations pro-

ceed from various causes, and are essentially different in their symptoms or characteristics, medical men have very properly drawn other lines of distinction, and classified them under different heads, according to the symptoms manifested.

Insanity has been variously divided by different authors. According to Frank into ten species, as 1st, mania hypochondriaca; 2nd, mania chimerica; 3rd, mania vivida, gay or lively; 4th, melancholica; 5th, religiosa; 6th, erotica; 7th, furiosa; 8th, dementia or fatuity; 9th, idiotica; 10th, chaos.

By Dr. Mason Good insanity is divided into melancholy and madness. *Melancholia* he divides into *attonita*, mute, gloomy, retiring melancholy; *errabunda*, roving, restless melancholy, evincing a constant desire to change the abode; *malevolens*, morose or mischievous melancholy, occasionally terminating in suicide or the injury of others; *complacens*, self complacent and affable melancholy, occasionally rejoicing in a visionary superiority of rank, station, or endowment. *Mania* he divides into *ferox*, furious and violent madness; *exultans*, gay and elevated madness; *despondens*, gloomy despondent madness; *demens*, chaotic madness.

Spurzheim is of opinion that we ought to admit of four different kinds or forms of insanity, according to the four different states or conditions of activity of the brain. *Idiotism*, *demence*, *alienation* of the manifestations deranged in *quality* and combined with incapacity to discern the arrangement, and *irresistibility*, when the will no longer exercises any influence over the actions.

Dr. Gall, in his Observations on Mental Aberration or Derangement of the Intellects, confines himself to those partial aberrations of each of the moral and intellectual faculties of the soul, which he considers primitive or fundamental, and which seem to constitute *monomania*.

Georget employs the terms *monomania*, *mania*, and *dementia*, to express that derangement which is partial, that which is more or less general, and that wherein there is an accidental diminution or extinction of intellect, an imbecility of judgment which is not to be confounded with idiotcy.

Lawyers, who do not and cannot enter into these physical and metaphysical distinctions, include the whole of the diseases of the mind under one comprehensive term, *non compos mentis*, meaning an *unsound mind*, or *unsound memory*. The recent acts of Geo. IV. and Will. IV. use the word *lunatic*, as meaning not only one of unsound mind, but also an idiot, or any one incapable of managing his affairs. Consequently the law only takes cognisance of such states of the mind as may cause the individual to commit an injury on society by violating its laws, or to commit an injury on himself, either by that improvidence which arises from incapacity, or by that violence which may lead to suicide.

The definition which Judge Blackstone gives of a "lunatic, or *non compos mentis*, is one who hath had understanding, but by disease, grief, or other accident, hath lost the use of his reason. A lunatic is, indeed, properly one that hath lucid intervals, sometimes enjoying his senses, and sometimes not, and that frequently depending upon the change of the moon. But under the general name of *non compos mentis*, which, Sir Edward Coke says, is the most legal name, are comprised not only lunatics, but persons under frenzies, or who lose their intellects by disease; those that *grow* deaf, dumb, and blind, not being *born* so; or such, in short, as are judged by the Court of Chancery incapable of conducting their own affairs." "The law constitutes the crown a trustee for these unfortunate persons, to protect their property, and to account to them for all profits received if they recover, or, after their decease, to their representatives."

On the first attack of lunacy, or other occasional insanity, while there may be hopes of a speedy restitution of reason, it is usual to confine the unhappy objects in private custody, under the directions of their nearest friends and relations; and the legislature, to prevent all abuses incident to such private custody, has thought proper to interpose its authority, by statute of Geo. III., for regulating private madhouses. But, when the disorder is grown permanent, and the circumstances of the party will bear such additional expense, it is proper to apply to the royal authority to warrant a lasting confinement.

The method of proving a person *non compos* is very similar to that of proving him an idiot. The Lord Chancellor, to whom, by special authority from the king, the custody of idiots and lunatics is intrusted, upon petition or information, grants a commission in the nature of a writ *de lunatico inquirendo*, to inquire into the party's state of mind; and, if he be found *non compos*, he usually commits the care of his person, with a suitable allowance for his maintenance, to some friend, who is then called his committee. However, to prevent sinister practices, the next heir is seldom permitted to be this committee of the person, because it is his interest that the party should die. But it hath been said, there lies not the same objection against his next of kin, provided he be not his heir; for it is his interest to preserve the lunatic's life, in order to increase the personal estate by savings, which he or his family may hereafter be entitled to enjoy. The heir is generally made the manager or committee of the estate, it being clearly his interest by good management to keep it in condition, accountable, however, to the Court of Chancery, and to the *non compos* himself, if he recovers, or otherwise to his administrators.

By the laws of ancient Rome, "if a man by notorious prodigality was in danger of wasting his estate, he was looked upon as *non*

compos, and committed to the care of curators or tutors by the prætor; and, by the laws of Solon, such prodigals were branded with perpetual infamy. But with us, when a man on an inquest of idiotcy hath been returned an *unthrift*, and not an *idiot*, no further proceedings have been had; and the propriety of the practice itself seems to be very questionable. It was doubtless an excellent method of benefiting the individual, and of preserving estates in families; but it hardly seems calculated for the genius of a free nation, who claim and exercise the liberty of using their own property as they please. 'Sic utere tuo, ut alienum non lædas,' is the only restriction our laws have given with regard to economical prudence,"—*Blackstone*, vol. i. p. 134, et seq.

The law properly orders that one *non compos mentis* shall be incapable of entering into any contract which may affect his property, and declares him incompetent to marry, thus protecting the unhappy individual from the frauds or artifices of others. He is also incapable of making a *will*, even of personal property, still less of real property. With respect to crimes, it is enacted, that when upon the trial of a person charged with treason, murder, or felony, it shall be given in evidence that the prisoner was *insane at the time of the commission of the offence*, and such person shall be acquitted, the jury shall be required to find specially *whether such person was insane at the time of the commission of such offence*, and to declare whether such person was acquitted by them on account of *such insanity*; and if they should so find, then the prisoner is to be kept in strict custody until his majesty's pleasure be known. The way in which the question of his sanity is submitted to the jury is, *whether at the time the alleged criminal act was committed, the prisoner was capable of judging between right and wrong, and did not then know that he was committing an offence against the law of God and of nature?* If he were so capable, then, although the mental delusion might be connected with the crime, and stimulated him to commit a murder in revenge for the imaginary injury, yet, if he knew he had no right so to avenge himself, he will be criminally responsible.

The term lunatic was adopted when it was supposed that the moon influenced mental as well as many other disorders, and that lunatics were subject to an exacerbation of the disease about the full of the moon. It has certainly been observed, that the paroxysms of insanity are much aggravated at that period, but this is easily explained when it is remembered that a strong light acts as a stimulant, and thus aggravates the disease; that insane people are more tranquil in an obscure than in a vivid light, and by night than by day. The want of sleep is one of the symptoms of the disease, and the continued light of the moon, by keeping them awake, tends to aggravate it.

In studying the general characters of insanity there does not appear to be any change or depravity in the functions of the organs of sense, and any slight alteration which may appear, proceeds entirely from the false impression made on the sensorium commune. M. Georget mentions a case, where the patient was not sensible of either hunger or thirst, and ate and drank without any appetite, yet notwithstanding he digested his food perfectly well. Some lunatics endure cold without appearing to suffer from its effects, but these are rare cases, for generally they are equally as sensible of either heat or extreme cold as other people. Some do not seem to feel pain, or at least do not experience any inconvenience from what by others would be felt as painful impressions. 2nd. The *perception* of objects is with many very imperfect, and leads them into numerous errors, whilst with others this faculty remains undisturbed. Sometimes objects strike the patient under a particular point of view, and give rise to ideas and a train of reasoning, either false or ridiculous; if he sees a person, who bears any resemblance to one with whom he is acquainted, however trifling, such individual is immediately taken for the other; thus, even in a lunatic asylum, they frequently believe those, by whom they are surrounded, as the guardians, or other lunatics, to be their friends or relations; thus a disagreeable smell discovers the existence of poison, any pain or accident is attributed to the plotting of enemies, or the influence of evil spirits, and so is it with the other perceptions. When these false perceptions arise without any sensible object, or external cause of excitement, they are *hallucinations*, the patients hear singular noises,—voices talking to them, which follow them about and haunt them continually, and which command them to act in such or such a way; others see constantly near them, in the air, men, spirits, and ghosts, which they look at, listen to, abuse, by whom they are followed, commanded, and taught various things. The other senses do not produce hallucinations so frequently as those of sight and of hearing. Yet, occasionally, they complain of fœtid smells, or disagreeable tastes, or that the ground moves under them, and other false perceptions of these senses. 3rd. The derangement of *thought* and of *ideas* is extremely varied; frequently they entertain extravagant conceptions, odd and singular associations of ideas, ridiculous opinions, false conclusions of the principles from which they emanate, unconnected discourse, rapid succession of ideas, of reasoning, and of conclusions more or less incoherent; a singular mixture of reasonable conceptions, of well founded opinions, of connected reasoning, sensible conclusions, and unimpaired talents, with the results of well marked characters of the most complete insanity. Some refuse to eat because they believe poison to have been introduced into their food, or that their digestive organs are in an unfit condition for its reception, or from

some other motive. Others are afraid to breathe, or to evacuate the natural excretions of the body. It may be remembered that, even under the most limited delusion, the mind seldom preserves all its freedom of thought beyond those limits; and it is also deserving of notice, that a large proportion of lunatics so badly observe passing events, and the circumstances with which they are surrounded, as not to be sensible of living in the midst of maniacs; it may be mentioned, that generally they are extremely prodigal and improvident. 4th. Nearly all lunatics retain the remembrance of their former life, and will readily converse on the incidents connected therewith, should the subject be entered on; they are also conscious of all such things as fix their attention. Many retain the recollection of present circumstances, and, after their cure, are frequently astonished at the remarks they made during their insanity, even when labouring under the most violent paroxysms, or when in a state approaching to idiocy, or abolition of intellect; they never forget the good or bad treatment they have experienced; and, when restored to their senses, sometimes compare the remembrance of their former state of delusion to that of a dream. 5th. The sentiments of affection, which maniacs entertained for their friends, children, and relations, are almost always obliterated in the most complete forgetfulness or indifference, frequently by hatred; they have the most unjust and mistaken suspicion of some, and an equally unbounded confidence in others. Every inclination, or *penchant*, every passion, or emotion of the mind, may predominate to the fullest extent; joy, melancholy, dread and terror, rage and passion, cunning and mischief, pride and vanity, an irresistible *penchant* to commit suicide, or homicide, the venereal appetite, and other feelings and desires may burst forth with great violence, and continue to predominate throughout the disease. 6th. Nearly all maniacs retain the power of *volition*, and their actions have an object in view; the most out-of-the-way and extravagant acts are founded on some previous train of reasoning, so that, after their cure, they can give the reason of their conduct under every circumstance. Some lunatics have sufficient strength of mind to conceal their condition for a length of time, either from their being conscious of the derangement of their intellects, or from knowing that their mode of seeing things would, by the world, be considered insane. 7th. Almost all are under the firm conviction that their perceptions, thoughts, and acts are true, just, and reasonable, in short, they consider themselves in perfect health, that they are of a "mens sana in corpore sano," and frequently consider those insane who act, think, or perceive differently to themselves, nothing can shake this conviction, neither reasoning nor the most positive proofs will cause a change of ideas or opinions. When placed under confinement they exclaim against the injustice of such conduct, and authoritatively demand their liberty, accusing one after another different individuals, the envy, hatred, and malice of men, or the malign influence of evil spirits, of having caused all their misfortunes, and of persecuting them by unknown and mysterious means, even to their most secret thoughts, and in places the most inaccessible. Sometimes they are sensible of the disordered state of their intellects and of their feelings, and are deeply afflicted at not having sufficient force of mind and firmness of will to enable them to repress those feelings and correct their judgment. 8th. The voluntary motions of the body are scarcely ever affected, except during the paroxysms of hysteria or epilepsy to which they may be subject, but these motions are sometimes more vigorous and fuller of energy than at others, especially when under the excitement of anger or of frensy. If left at liberty, they are then observed to walk with an impatient step, to run, leap, climb, to strike, break, and destroy every thing about them. The physiognomy assumes great expression, and strongly depicts the disordered state of the mind. Joy, content, timidity, melancholy, despair, anger, agitation, rage, and frensy, stamp their peculiar characters on the countenance of the insane as well as on the sane, only with the first they are more strongly marked, because those passions, which constitute the principal character of the derangement, acting continually, and with violence, necessarily leave deeper traces. The expression of the countenance is sometimes changed to such an extent by rage and anxiety, or timidity and melancholy, that the individual is scarcely to be recognised, even when cured. The extinction of intellect, and absence of passion in complete *dementia*, gives to the physiognomy an expression of indifference, vacancy, and imbecility. The organs of respiration perform their natural functions, but, from frequent shouting and singing, the voice often becomes changed, sometimes hoarse and rough, at others shrill, or even inaudible, speaking in a whisper. The diminution of the vis insita musculorum, and even general palsy of the muscles, are phenomena not unfrequently observed to follow a long continued state of dementia. 9th. The greater part of lunatics are subject, some frequently and almost continually, others rarely and, as it were, accidentally, to species of paroxysms marked by an increased degree of activity in their ideas, and an exacerbation of those passions, which constitute the peculiar character of the derangement, as increased nervous agitation, anger, indignation, passion, and, sometimes, the most violent, headstrong, and ungovernable rage and frensy. At times this state of excitement is manifested by uttering imprecations, apostrophising the absent, and such like, consisting of an incessant flow of garrulous loquacity. The poor maniac continues to talk and agitate himself, so that one is neither understood nor yet listened to. He resembles a

machine wound up, and which cannot be stopped, except by arresting the moving principle, or the cause which puts it in motion. Sometimes this exacerbation consists merely of nervous irritation, a feeling of impatience, accompanied with noisy anger. At other times, it is furious frensy, accompanied with the highest excitement and incoherence of speech, with vociferation and violence, with a desire to break and destroy, to beat or kill. The face becomes animated, the eyes prominent and sparkling, the mouth and fauces are dry, the head hot, and the vessels turgid. When the paroxysm is over, the patient sinks into a state of exhaustion, and is often pale and trembling. These different species of excitement are frequently produced by hallucinations, erroneous ideas, mistaken opinions, and false impressions. 10th. Other symptoms are frequently on the side of the head. Cephalalgia, or headach, is often the precursor of a fit of delirium; in general it ceases during this period, and in many cases returns with convalescence. Women are more subject to these attacks than men. Watchfulness, or the rest broken and disturbed, is one of the most frequent symptoms of mania, especially at the invasion of the disease, and during the period of excitement, and also often long after it has passed into a chronic state. Maniacs have been known to pass months and years without enjoying calm repose or refreshing sleep; and what is remarkable, this watchfulness or want of rest is not attended with the same injurious consequences and decay of health as would be experienced by individuals whose reason is unimpaired. Yet some lunatics sleep sufficiently well, even during the period of excitement; in *dementia* the sleep is generally long and profound. When the excitement of the brain is intense and acute, there is a great determination towards the head, attended with heat, suffusion of colour, and accelerated circulation; it is, especially at the invasion of the disease and during the paroxysms of rage, that the heat of the head is increased, the eyes become fiery and suffused, the face and the forehead of a bright carnation tint; the turgescence of the capillary vessels and the vibrating pulsations of the carotid and temporal arteries, indicate the train of symptoms which accompany such a state.

The delusion is sometimes confined to one exclusive idea, which seems to form a centre, or focus of attraction, around which all the loose straggling thoughts, as it were, group themselves; or, when the delusion is more general, a series of ideas present themselves, all dwelling on the same object, and constituting a strongly pronounced passion, which not only fixes the attention of the patient, but also of those who observe him. This, gentlemen, is *monomania*.

When the patient talks extravagantly on every subject, wandering from one to another, without any being fixed or permanent, without any connexion in his ideas or coherence of thought and speech, accompanied with an incredible activity in the delusive operations of his mind, it is then termed *mania*.

When there is a perfect inactivity of the mind, an indifference to passing events, an absence of all the passions and moral affections, an entire extinction or abolition of intellect, this state of mental non-entity is called *dementia*.

Reviews.

Records of General Science. By Robert D. Thompson, M.D., with the assistance of Thomas Thompson, M.D., F.R.S.L., F.R.S.E., &c., Regius Professor of Chemistry in the University of Glasgow. No. I. January, 1835.

We hail with great pleasure the appearance of a scientific periodical like the present,—we believe it to be an harbinger of the rapid progress of science. The editors of the work are so renowned for their talents, that no eulogy of ours, even were it necessary, could enhance their reputation. We shall take the liberty of availing ourselves of the opportunity of noticing those parts of its contents which relate either immediately or collaterally to medicine. The collateral sciences are assuredly much neglected by the profession in this country. A general knowledge of the symptoms of disease and of common therapeutical agents is too universally regarded as a quantum sufficit for a medical practitioner. We think far otherwise: a medical man's acquirements, if confined but to his own professional sphere of knowledge, would be extremely limited. The whole domain of Nature's works should be surveyed by him. The knowledge we possess on medicine is greatly contracted; it might be contained "in a nut-shell"—using the hackneyed simile for lack of a better,—hence the necessity of extending our researches into other regions.

The art of "*calico printing*" is a subject certainly not medical, but it is one of equal interest to our profession, as to other members of the community. To the vulgar it is an extraordinary process, but, to the chemist, the phenomena it exhibits are simple and intelligible; he can comprehend and explain its various processes on the most simple principle; he knows the use of the mordant, and is acquainted with the composition of the materials of which the dye is prepared. To a young practitioner in a manufacturing district, such knowledge may be serviceable in ministering to his success in practice, a consummation generally required. In the present number is also an excellent article from the talented pen of Dr. T. Thompson on *Respiration*. He controverts the opinion of Lavoisier, Menzies, Day, Goodwin, &c., that in every individual the same chemical alteration in the air is effected in respiration. He refers to the opinions of Drs. Fyfe and Prout, where they

state that in persons taking mercury or nitric acid or living on a vegetable diet, a very appreciable difference occurs in the proportion of carbonic acid expired. Dr. Thompson has found in a very careful investigation of the subject, "that the most unexpected alterations are observable in the same individual, though he be in perfect health, and though he make no sensible alteration in his mode of living. In a series of tables the relative proportions of carbonic acid expelled from his own lungs and those of others, are shown, in which a considerable variation is observed; on one day, for instance, at eleven o'clock, the quantity is but 4·64, whereas, on another day, at the same hour, it is 7·16. From numerous experiments he infers, "that the average volume of carbonic acid gas in 100 volumes of air expired from the lungs at 11 o'clock, A.M., is 4·24."

The quantity of atmospheric air which we inspire is shown to be remarkably variable. By a forced respiration as much as 250 cubic inches can be inhaled by one individual,—by another, not more than 150.

In natural respiration, the quantity of air expired is, on an average, sixteen cubic inches. He adduces a variety of illustrations, and concludes,

"If these data be correct (and they cannot be very far from the truth) it will be very easy to calculate the quantity of carbon thrown out of the body daily by respiration. Allowing twenty respirations per minute, and sixteen cubic inches of air taken in and thrown out at each inspiration, we have 28,000 respirations in twenty-four hours, and 460,800 cubic inches of air passing through the lungs. Of this $\frac{3\cdot72}{100}$, or 17141,76 cubic inches, are converted into carbonic acid gas. Now, 100 cubic inches of carbonic acid weigh very nearly 50 grains; so that the weight of carbonic acid formed is 8; 570, $8\frac{3}{11}$ of which, or 2337·5 grains are carbon. This amounts to nearly nine ounces avoirdupois, or somewhat more than half a pound."

Researches on the Blood. By GMELIN and TIEDEMANN.

After some ingenious inquiries they arrive at the following inferences:

"1st. That in the pulmonary cells inspired air is absorbed into the moist membranous vessels, and is thus brought into contact with the blood.

"2nd. The azote of the air is not sensibly absorbed by blood, but almost the whole of it remains in the cells. On the contrary, as oxygen is taken up by the blood abundantly, it flows out of the cells into the vessels in proportion to its absorption, and the mixture of gas remaining in the lungs must therefore contain more azote and less oxygen than the air.

"3rd. The oxygen taken up by the blood contributes partly with carbon and hydrogen, and forms carbonic acid and water, and partly unites with the solid organic compounds contained in the blood. From these proceeds acetic or lactic acid, which combines with a portion of carbonate of soda contained in the blood, and its carbonic acid into the cells.

"4th. The acetate of soda loses in its course through the different secreting organs its acetic acid, combines again with carbonic acid after undergoing many decompositions in its passage with the mass of blood through the body, and enters into the lungs on its return as carbonate of soda."

At page 76 there is an article on a "Method of destroying Mice, &c., in their Lurking Places." The notice is not so much from its interest to medical men, as showing the powerful influence of sulphuretted hydrogen on animal life.

Animals, when allowed to breathe the gas, fall as if struck with a bullet. Even when considerably diluted with atmospheric air the effects are deadly. A horse dies in less than a minute in air containing $\frac{1}{250}$ part of this gas. A dog of moderate size is speedily killed in air containing $\frac{1}{1000}$, while a greenfinch expires in a few seconds in air possessing $\frac{1}{1500}$ of sulphuretted hydrogen.

We have noticed but a few of the articles, and these but cursorily. Our limited space, and the immense quantity of strictly medical matter we are obliged to introduce into our Journal, compel us to be brief in our notices and extracts; yet we have given sufficient, we believe, to induce our readers to think well of the "Annals of Science." Their perusal would well repay them.

A Practical Treatise on Diseases of the Joints. By W. J. WICKHAM, Surgeon to the County Hospital, Winchester, pp. 178. 8vo. Highley. 1834.

Our attention has been called to the present work, on account of the practical matter it contains.

The author makes no pretensions to originality or erudition; he gives the results of sixteen years' experience in hospital practice, where, according to his own statement, diseased joints form a large proportion of its patients.

The structures which enter into the composition of the joints are enumerated, with a notice of the vital properties of each, under the title of "General Observations," in which chapter he makes some very judicious remarks on the seat and origin of the various diseases of the joints. He adopts the system which every scientific man will eventually, we predict,—that of arranging diseases according to the structures affected. We agree with the author that as each structure displays its own properties in health, in disease it will do so likewise; but that, when "disease is propagated from one part to another, a confusion must necessarily arise in the symptoms produced, and the detection of its actual seat be rendered difficult, if not quite impracticable." Nevertheless, in despite of all this, it is a great satis-

faction to the practitioner, to use an Irishism, to say to himself, this particular disease of the joint was primarily in the synovial membrane, and successively extended itself to the cartilages, bones, and ligaments, and ultimately to the surrounding structures.

The various diseases of the bony parts of the joints are next discussed, viz. exostosis, periosteal and medullary; necrosis, caries; in which the diagnostic marks of each are very clearly given, with the modes of treatment adopted by the author.

The symptoms characterising each differ little from those enumerated by other authors. Mr. Wickham strongly recommends, for deep-seated disease, counter-irritants, particularly *the issue*. There is one observation we must extract, it is worthy of notice. He says that, in diseases of bone, erysipelas is a frequent concomitant. "A disposition to frequent attacks of inflammation of the skin over the joint, of an erysipelatous character, and this recurring so often as to considerably injure the general health. This is a circumstance which I do not speak of as an established symptom of diseased bone, but I have seen it so constantly accompany it, and so seldom occurring when the other textures are alone diseased, that I lay great stress on it as indicative of a morbid state of the bony parts of the joint." We have frequently seen the same symptom in periostitis, where the bone did not appear to be in the least involved.

The symptoms characterising ulceration of the cartilage, the author regards as well marked. "*The pain* is peculiar; it is continued, and of the pricking kind. Patients describe it by saying they feel as if an animal was gnawing at the part. This pain is deep in the articulation; but there is for the most part a remote or distant pain, a dull and continued aching down the lower part of the limb. This pain generally extending along the whole, now and then confines itself to one particular spot."

The pathological characters of the other structures are brought under discussion in a concise yet sufficiently ample manner. We regret that we cannot enter more fully into the character of the work. If not the best, it is one of the most useful works on diseased joints in our language. Its plan is good, and the different subjects are treated in a clear and perspicuous manner.

Report of Societies.

MEDICO-BOTANICAL SOCIETY.

January 13th, 1835.

G. J. Guthrie, Esq., F.R.S., in the Chair.

A certificate in favour of Charles Johnson, Esq., Lecturer on Botany at Guy's Hospital, was read, and ordered to be suspended the usual time in the meeting-room of the Society.

Recent specimens, in leaf, of the Scilla maritima, Olea Europea, Ruta graveolens, Marrubium vulgare, Pistacea lentiscus, Juniperus Lyciæ, Juniperus Sabina, Juniperus communis, Arbutus uvæ ursi, Laurus nobilis, Allium sativum, Acorus Calamus, Polygonum bistorta, Spartium scoparium, and the Laurus camphora, were on the table, together with a fine specimen of the Helleborus niger in flower. The circumstance of so many medicinal plants being in leaf at the present season was mentioned as an extraordinary proof of the mildness of the winter, which was further evinced by the fact, that the bulbs of the Scilla maritima, in the Museum of the Society, were germinating.

In reference to the Laurus camphora, which was a fine specimen, Dr. Sigmond mentioned that it is now a well-known fact, that the camphor in commerce is not procured from the L. camphora, but from the *Dryabalanops* of Sumatra, as mentioned by Mr. Colebrooke. He alluded to a present from Mr. Foote of some very fine specimens of the wood of the L. camphora, which it appears had been exposed to the direct influence of the sun's rays, and it was curious to observe that, in consequence, the camphor had crystallised on the sides of the bottle in which the wood was contained.

An Essay, by M. Lecanu, on the Chemical Composition of the Iris fœtidissima, and its Application in Medicine,—and a paper, by Dr. Lombard of Geneva, on the Use of the Alcoholic Extract of the Aconitum in the treatment of Acute Articular Rheumatism, were then read.

[We shall have the pleasure of laying both these communications before our readers.]

After some remarks by the Chairman and Dr. Sigmond, the vacancy of the Professorship of Toxicology was announced, and the meeting adjourned to Jan. 16, the anniversary meeting, when the election of officers will take place.

ELECTION OF MR. WAKLEY, M.P. FOR FINSBURY.

Mr. Wakley has succeeded at his third attempt in getting returned as one of the representatives in Parliament for the metropolitan borough of Finsbury, having polled 3,359 votes. On Saturday, when the returning officer declared him and Mr. Duncombe duly elected, Mr. Wakley, in the course of his address of thanks, alluded as follows to the question of medical reform:—"I have directed my attention to some abuses which have not elicited any remark from me during this election; and I will tell you why I have been silent on the subject. I refer to our public hospitals and charities, at least which were intended to be so. I have made no reference to my efforts to reform these, because, if I had done so, every party connected with them would have come forward to oppose my election. It struck me, that, if I remained silent, they would suppose I had forgotten them, but in that I assure you they have made an unfortunate mistake for themselves. The College

of Surgeons in Lincoln's-Inn-Fields has at every election thrust forth the whole of its power against me, and so have the conductors of our endowed hospitals; but when I get into the House of Commons, I shall show, by returns which I shall call for, that I have neither forgotten the extent of their funds, nor the extent of their delinquencies. Gentlemen, the mind of one individual is not sufficient to labour against the fact of every abuse that may be presented to it. It is impossible for any man, however talented, to bear up against the weight of every abuse; but, by a judicious selection of those subjects which his mind is capable of understanding, he may accomplish all the good he may desire. In England, you have money enough bequeathed to you to educate all the children in the country, without the expenditure of a single farthing for any man, either rich or poor. Yet, into the majority of our public institutions the children of the rich only are received. Again, with reference to the hospitals, they are not open to the poorest; for if a man goes to one of them in a state of extreme poverty, having scarcely clothes to cover him, he is spurned from the gates, or he will not be admitted until he finds security for the payment of his burial expenses if he should die. Guy's Hospital has property amounting to more than fifty thousand pounds a-year, the whole of which is under the control of one man, although there are fifty governors; they are all selected by him, and he takes care that no black sheep shall be admitted. The founder of that hospital, doubtless, was actuated by a benevolent design, and never intended that the poorest should be rejected from the gates; and if the men that are now the governors findthat the institution does not work well, they ought not to object to have it remodelled. I know it has been productive of great benefit, but it ought to be open to the poor as well as to the middling classes. I mention this why medical men have opposed me, because they were connected with these institutions. As long as you support me, however, I shall be able to encounter every one of my foes."

ROYAL COLLEGE OF SURGEONS IN IRELAND.

The officers for the present year are :—*President*—A. Read. *Vice-President*—F. White. *Secretary*—J. W. Cusack. *Assistant Secretary*—R. Harrison. *Court of Censors*—A. Jacob, W. H. Porter, M. Collis, R. Adams, T. Rumley, E. M'Dowel. *Court of Assistants*—S. Wilmot, J. W. Cusack, R. M'Namara, J. Kerin, R. Harrison, J. Hart, A. Palmer, W. Corbet, C. Benson, W. Hargrave, J. Hanston, C. Fleming. *Midwifery Court of Examiners*—Chairman, L. W. Whitstone; Deputy Chairman, L. Armstrong. *Examiners*—R. Shekleton, S. Cusack, J. Peebles, T. E. Beatty, H. Maunsell, W. W. Campbell.

THE

London Medical and Surgical Journal.

Saturday, January 17, 1835.

A FEW HINTS ON MEDICAL EDUCATION.

"Ingenuas didicisse fideliter artes
Emollit mores."

As the time is fast approaching when we may reasonably expect that the subject of Medical Reform will be again brought before the legislature, it may not be superfluous to make a few observations on the state of education among medical men in general, and in order thereto it may be necessary to cast our eyes a little retrospectively.

In examining the causes which have produced and continued the mass of absurdities clinging to the medical profession, under the appellation of laws and regulations, it must be confessed, that glaring ignorance and supine apathy, on the part of its members, seem to claim pre-eminence. Year after year has rolled on in darkness and servile imitation; year after year has beheld swarms of apprentices emancipated from the thraldom of the counter and pestle, emerging from their nauseous sanctum of drugs, contented with the slender knowledge they had scraped from the superficial practice of their nominal instructors but real masters; deeming, too, that knowledge veritable and unassailable, and equal, when aided by attendance on a few courses of lectures, to every emergency that might occur. Some, it is true, ambitious of obtaining the diploma of the College of Surgeons, which however the law does not require, pursued a curriculum a little more extended; but the bulk of general practitioners consisted of such as had attained nothing more than the saws and

solemnities of their masters. Such a race as this, then, having set themselves down to practise, could feel no anxiety that affairs should change. Their rules of thumb were easily put in execution, and required no more brains than would furnish the minimum of reflection. Their pot boiled at the expence of their patients, their loaves and fishes multiplied, and they were contented. Rebellion against their grave superiors, who, with gold-headed canes, exorcised the lesser fry into submission, never entered their heads,—*pax erat ubique*, and the tribe of Dr. Last flourished innocent of science.

But these times could not endure for ever; the march of intellect in every other department of knowledge pressed heavily from without against the deeply folded veil, with which ignorance had invested these degenerate sons of Æsculapius, and finally rent it. It was then these bedarkened children, lifting up their eyes, beheld, through the chinks of their cavern, the light which beamed upon them. A few, more energetic than their brethren, bestirring burst the trammels which had so long and so firmly bound them down, and began to think for themselves; with reflection came the conviction that their house was not in order, and the tocsin of reform quickly and sternly resounded through every corner of its fabric, awakening into fresh life the stagnant Erebus.

Such was the case. Looking at the state of education of medical men of the present day, it is obvious, that although infinitely better informed than their brethren of thirty years ago, still their attainments are confined, in nineteen cases out of twenty, to the mere matter of their profession. Their studies have run in a narrow channel, and an acquaintance with the Greek or Latin language, or the mathematics, is among them very rare,—*ingenuas didicisse artes* has not been their motto, and nothing is more common than to see a practitioner, eminent for professional tact, err tremendously in the formation of a Latin sentence. This is not as it should be. The world generally considers a medical practitioner to be classically educated, and he himself countenances that opinion, by writing, or attempting to write, his prescriptions in Latin, thereby, as it were, acknowledging it to be a necessary acquirement. Yet the acquisition of it has never been made a matter of necessity, unless at Apothecaries' Hall. Athenian or Bœotian has indiscriminately invaded the precincts of medicine, and undisturbed gabbled whatsoever dialect nature had blessed or cursed him with.

It is true, that, in the examination at Apothecaries' Hall, a few mouthfuls of Latin are demanded, but these, cut and dried upon the Hamiltonian System, are easily ground into, or gulped down by, the student, to be expectorated upon that awful occasion. However it is not this slight imbibition of classical lore that can answer any good purpose; to be useful the acquaintance with it must be solid; and, in any future law, a provision should be made, that a competent preliminary examination, in both Greek and Latin, should be undergone. This would deter many who now thrust themselves into the profession, with perchance only the schooling of an unwashed artisan, from doing so, be the means of rendering it more respected, and inducing parents to pause ere they consigned their unlettered progeny to its pursuit. We are aware, that it may be objected "of what utility can a knowledge of those dead languages be to the medical student, seeing that he now manages to acquire his profession

without their aid." We answer that a knowledge of them smooths many difficulties in the career of the student, enables him to understand at once the technical terms so often recurring, and that exclusive of the polish which their attainment imparts to the mind, and which, more than any other, separates it from the vulgar level, the very discipline of studying them gives a habit of reflection and research, which is abundantly required in medical pursuits. Indeed, the lack of such accomplishments has mainly contributed to keep them in subserviency to anarchy and misrule.

Let us now turn our eyes to the future. There, indeed, a brighter prospect opens, and if wisdom but guide the acts of our lawgivers a splendid career, on the road to perfection, may yet betide our long benighted art. A new era, fraught with advantage both to its professors and the public, shall commence, and true science, so long humbled in the dust, soar to her wonted height. Wise laws, however, can alone bring about this desirable consummation, and whoever adds his mite of information, or advice, in the present critical emergency, in furtherance thereof, deserves praise of all, both in and out of the profession.

Thinking thus, we should say that when our existing medico-legal code is revised and corrected, one particular point should be insisted upon by the advocates of real Reform, that of a preliminary liberal education in the candidate for admission, not such as is usually obtained up to the age of fourteen, a period when the reflective powers are but commencing to bud, but one which shall embrace two or three additional years, say up to seventeen or eighteen, when the mental powers being more expanded are capable of bearing fruit. These years might be gained by curtailing, or rather abolishing, the present system of apprenticeships, an ordeal through which whosoever has passed can scarcely deny that *one* of its dreary and monotonous years is fully adequate for the modicum of instruction commonly conveyed in its whole term. Instead of this bondage let the student, with his mind already exercised as we have recommended, enter upon his professional curriculum at the age of seventeen or eighteen, and he will, by a judicious distribution of his time, gain in one year more information than he would in ten under the degrading system of vassalage, called apprenticeship. Let him persevere for four or five years in searching for knowledge, under the direction of competent professors in their various departments, instead of slavishly submitting to the mechanical drudgery of the pestle and mortar, and a mighty difference in his bearing and talent will soon become conspicuous; confidence will take the place of sheepishness, and manly independence supplant that sneaking humility which too often haunts the counter-bred practitioner. Having obtained sterling knowledge he will put trust in it, and will be trusted; his confidence in himself will command the confidence of others.

If an additional argument were wanting against the cruelty and impolicy of binding a youth for a term of years to learn what he assuredly will be master of in a few months, truth requires it should be known, that many very ignorant and, as the law stands, even unlicensed practitioners, or only privileged because they were in practice before the year 1815, stretch out their claws to seize at once a premium and a bond-servant; illiterate and overweening, many, very many, such carry on their quackery in this metropolis, belonging to no school or

college under the heavens, and professing a smattering of surgery and physic, no one knows how obtained. Let not, then, the student be subjected to such slavery, but having in view the attainment of a degree, which ought to be the same for all who follow the healing art, unshackled by the caprice of a law calculated for the exclusive benefit of one side at the expence of the other, cultivate science where she is to be found, at the fountain head. By following this plan a new race will arise, whose energies shall far surpass the dreary slothfulness of its predecessors, and redeem the proud name and station of an art which, in whatever clime it is professed, contemplates unmingled good to mankind. We shall, in future numbers, return to this subject, investigating it more in detail,—exposing errors where they exist, and proposing their remedies. *Verbum sat.*

DR. STOKES'S LECTURES.

[In justice to Dr. Stokes we insert the following letter,—it is another fact, in addition to what has been already adduced, respecting the conduct of our contemporary.—Eds.]

To the Editors of the London Medical and Surgical Journal.

Gentlemen,—Since I addressed you last, I perceive that Dr. Ryan has published a second of what he calls a lecture of mine. This is composed from notes taken at a course of lectures delivered nearly four years ago at the Meath Hospital, and not, as was announced, in the Park-street School. Dr. Ryan's mode of proving that he had not printed the remaining lectures of the course published in your Journal, but that he had, *bonâ fide*, a copy of all the lectures from his "*Unknown Friend*," or that this friend had them for Dr. Ryan's use, is somewhat amusing. He publishes as the continuation, not any of the lectures so given, but reports of lectures given long ago, and so bad as to be scarcely recognisable.

To prove my assertion that these lectures are shamefully reported, I shall make a few comments on them.

In speaking of the employment of auscultation by Hippocrates, Dr. Ryan, or his reporter, says, "*Laennec forgot this passage in Hippocrates.*" The writer of this, of course, never read the work of Laennec.

When speaking of percussion, the following sentence is put into my mouth,—"*It furnishes no means of recognising pneumo-thorax, or rather it becomes an almost unavoidable source of error in this case.*" The absurdity and blundering of this sentence are quite in accordance with the Journal in which it appears. Dr. Ryan, or his reporter, should learn that percussion is one of the most certain modes of recognising pneumo-thorax, but that its use is *optional.*

Again, "*Percussion gives no indication of aneurism of the great vessels, unless in cases where light and the application of the hand put the matter beyond doubt. Anasarca causes a dull sound, but, if it be slight, you may push the fluid aside with the left hand!*"

Why the *left* hand should be preferred is not stated, but a note is appended, in which I am made to refer to the lectures of Dr. Fletcher, of the publication of which I could have known nothing at the time; a *ruse* which no one will estimate more properly than the learned lecturer himself.

"*If the part of the chest be dull on percussion, when the patient is in the erect position, and clear when he lies down, it indicates effusion into the pleura.*"

This is a statement so ridiculous that the merest tyro could not read it without laughter. A little after we find a new diagnosis of foreign bodies in the air passages.

"*A kernel got by accident into the lungs of a child; in the right lung no respiratory murmur could be heard, but percussion gave a clear sound, proving that the kernel lodged there!*"

Again, we are told that the sound on percussion in the third stage of pneumonia *is clear*. *Emphysema* is confounded with *empyema;* and it is stated that by *inspection* we can tell whether tubercles be extensively softened. We are told that though immediate auscultation is very necessary in the exanthemata, "*it is too disgusting to be adopted.*" It is to be regretted, indeed, that the medical attainments of this writer were not on a par with the acuteness of his olfactories. In the second lecture I am made to say, that if the general symptoms of phthisis be absent, the presence of a muco-crepitating râle is a certain sign of tubercle! and further, that œgophony is *pathognomonic* of pleuritis; statements which only prove the melancholy ignorance of the writer.

The publication of such statements as the above can be only explained on one of of two suppositions,—either the desire of the writer to publish a wretched libel, or his complete ignorance of the whole subject.

In a letter of Dr. Ryan's, which is before me, explanatory of his rupture with his former partners in the *London Medical and Surgical Journal*, he states, among other reasons, that he could not bring himself to make the Journal "*a vehicle of quackery and humbug*," and that, in his new capacity of sole proprietor, he determined to be "*aut Cæsar aut nullus among journalists.*" On these texts the preceding facts furnish an excellent commentary.

I remain, gentlemen,
Your obedient servant,
WILLIAM STOKES.

50, *York-street, Dublin,*
January 9, 1835.

Foreign Medicine.

Professor Andral on Follicular Enteritis.

THE parts that are more particularly affected in this disease, are the follicles which are spread about this membrane. There is with those morbid phenomena that accompany it, a constant participation of the nervous and circulatory systems, which betray the alteration of the intestinal follicles. In some cases the blood appears to have some sudden notable alteration. These alterations are recognisable, 1st, by the senses; 2ndly, by the nature of the symptoms which present an analogy to those that we observe in cases in which certain poisonous or putrid substances have been introduced into the circulatory system.

Moreover, in follicular enteritis the general symptoms are so much more prominent than the local, that in some cases they so conceal them, that they are only appreciable to the observer from the great derangement in the economy.

Many authors are at difference as to the nature of this affection. Some state that the intestinal lesion produces all the symptoms, is always in proportion to the extent of alteration and the gravity of the symptoms. Finally, the disease is altogether in the intestinal canal.

The disturbance of innervation and of the circulation is purely sympathetic. According to this, they do not admit the difference between follicular and gastro-enteritis. Others state that the follicular intestinal lesion is primitive, it shows itself at the commencement, and is the cause of the nervous and circulatory disturbance. The alteration of the digestive canal produces nervous symptoms, as they are produced from solution of continuity in tetanus. It is the wound which is the determinant cause of tetanic symptoms; but, if the wound gets well, the symptoms of tetanus continue. Finally, according to some medical men, the alteration of the intestinal follicles is, in fact, only a general cause, a consecutive lesion, a simple element of the disease. Under this hypothesis they compare follicular enteritis to the febrile exanthemata, in which the integumentary lesion is only a simple pathological element of a general condition.

Before taking part in these different opinions, I will successively enumerate the anatomical

characters, the causes, and symptoms of follicular enteritis.

Different names have been introduced for this affection. MM. Petit and Serres have minutely described the anatomical lesions, in a work published in 1811, which they named *fièvre entero-méséntérique;* MM. Chomel and Louis have more recently described it under the name of *fièvre typhoïde;* M. Bretonneau has called it *dothinentérite;* in the first edition of my clinic, I have placed it under the head of *exanthème intestinal;* M. Broussais has placed it under the denomination of *gastro-entérite*, and M. Bouillaud under *entero-mésentérite typhoïde.*

Anatomical characters.—The principal lesion has its seat in the follicles which invade the mucous membrane of the intestines. The membrane, even if not in every case, is in a great many exempt. It does not invest every part of the alimentary canal; it attacks particularly the inferior part of the ileum, the ileo-cæcal valve, the cæcum, and colon, and in these parts we find the principal alterations; very rarely are they discovered nearer the stomach; in the greater majority of cases this viscus is found healthy.

The isolated follicles, or the glands of Brunner, present themselves under the form of small buttons, raised a little above the mucous surface. They are at the commencement of the affection red, but at a later period become brown. Occasionally they speedily disappear, but at others remain for a long time stationary, and become in a chronic state. They sometimes become ulcerated, this process commences at their point, and extends to their base.

The number of these button-like prominences vary; they are sometimes isolated, at others confluent, resembling certain variolæ. The intestine in this case presents a similar aspect to the skin in febrile exanthemata. The resemblance is much more striking when the ulceration of the summit of the follicles gives to them the umbilical form of variolic pustules. At other times they are entirely destroyed by ulceration. Lesions of the isolated follicles are less characteristic of the disease, than when the follicles are in clusters, as I am about to consider.

These follicles, but slightly appreciable in a physiological state, become more apparent during the course of typhus fever, and may be observed in the form of oval or rounded patches of a bright red, or brown colour. Their prominence is not exclusively owing to the development of the follicles themselves, but to a thickening of the sub-mucous cellular tissue. Their surface is unequal, granulated, and flattened. In cases in which the disease terminates by resolution, they become pale, and disappear, and nothing more than a somewhat black puncture can be observed in their situation, which resembles the beard when recently shaved.

If, on the contrary, the disease progresses, erosion takes place on their surface, which continues to increase, and sometimes forms an oval ulcerated surface. This ulceration at times extends to the mucous membrane itself, at other times it becomes gangrenous; an eschar is then formed, it becomes detached, and an ulceration is left, the borders of which are of a bright red, and formed by the mucous membrane, and the surface is formed either by the subjacent cellular tissue, or by the muscular membrane. These ulcerations may remain for a long time stationary, they sometimes will increase in depth, and perforation of the walls of the intestine be the consequence. Vessels are sometimes laid open by the ulceration, and frightful hæmorrhage is the result. At other times increasing in depth or in width, cicatrisation takes place, their borders decrease, become pale, so also does the ulcerated surface itself; a pellicle even is formed on their surface, a rudimentary mucous, deprived of its villosities like the mucous membrane of the bronchiæ and frontal sinuses; at other times may be observed on their surface a few wrinkles, which indicate the process of cicatrisation of ulcers.

The seat of these patches I have described to you; their number is very variable. In some cases only two or three are observed, in others a great number of them. In the majority of cases, the seriousness of symptoms is proportioned to the extent of the alterations; nevertheless there are some exceptions.

In order to decide the question whether or not lesion of the follicles produced the symptoms of typhus fever, it was important to ascertain whether this alteration was manifested at the commencement. There does not exist in the science of medicine any case which has terminated in death before the fifth day. Whatever may be the period of the disease at which those afflicted have died, this intestinal exanthema has been found on the autopsy. M. Bretonneau has observed it on the fifth day, M. Chomel on the seventh, M. Louis on the eighth, and I have myself observed it on the sixth.

M. Bretonneau has stated that intestinal exanthema presents in its progress fixed periods, which, from their regularity, approaches those of variola, so that by knowing the epoch of the disease, before the post-mortem examination takes place, the exact state of the affection might be announced. M. Andral exposed here the doctrines of M. Bretonneau, and thought that facts did not warrant him in attributing to follicular enteritis fixed periods as he had maintained.

Are these patches, with the anatomical characters as I have just described, observed in other diseases besides follicular enteritis? To this question we may boldly reply in the negative. It has been found, it is true, in individuals who have died from small-pox, from scarlet fever, but in such cases they do not present all the characters, as are observed in the patches from *dothinentérite.*

In epidemic cholera, the follicles have been found also very developed, but these follicles present an aspect very different to those which are observed in intestinal exanthema of follicular enteritis. In pulmonary phthisis are occasionally observed ulcerations analogous to those of dothinentérite, there are other varied alterations. The mucous membrane between the follicles is sometimes healthy, sometimes more or less altered.

In the latter case it may present all the lesions that we find in gastro-enteritis, from simple redness to softening, and even ulceration. The stomach, duodenum, and jejunum, are sometimes exempt from alteration, sometimes they present redness, ramollissement, &c.

The œsophagus and pharynx are sometimes pale, at other times red; they are more frequently found in a state of ulceration in this than in any other affection.

Lesions of the vascular system are not constant. The heart has been sometimes found more flabby than natural. As to the redness of the internal surface, in the majority of cases it appears to me to be a cadaveric phenomenon. The blood contained in the cavities has been found more diffluent than in ordinary phlegmasia, but that is not always the case. It is not the same with lesion of the lympathic circulation. The mesenteric glands are, in the greater number of cases, more or less seriously affected. They are found sometimes red and swollen, sometimes many points of suppuration are discovered, at others they are transformed into true cysts filled with pus. The spleen is frequently altered, sometimes it has been found increased double or treble its natural size, at other times not increased in volume, but reduced to a pappy consistence.

Lesions of the respiratory apparatus are of frequent occurrence; the mucous membrane of the bronchiæ is found red and much injected. As to the pulmonary parenchyma, it presents variable alterations; sometimes only simply congested, at others, in a complete state of hepatization; and again, in others, it is found similar to the spleen in a state of ramollissement, Lesions of the organs of secretion are not constant. The parotid gland, and the cellular tissue which surrounds it, are sometimes tumefied. The liver is found occasionally very soft. The mucous membrane of the bladder, in a few subjects, has been found red, but generally in those who for some time have submitted to catheterism.

There is no special lesion observed in the nervous centre, or in its appendices.

Preparation of Artificial Ice.

There are numerous acute diseases which are much benefited by speedy and repeated applications of ice; but it frequently happens that it is difficult, if not impossible, to obtain it, and recourse then must be had to some chemical process. A method much more simple than even that invented by M. Lourdemanche, we observe from the pen of M. Boutigne, in the *Journal de Chimie Médicale*. The following is an analysis of his proceeding:

1st. An oak box, thirteen inches six lines in length, three wide, and six in depth.

2nd. Two boxes of tin of the same form, each having twelve inches in length, seven lines in width, and six inches and a half in height.

The first box will contain the frigorific mixture, the other two the water to congeal.

The frigorific mixture consists of three lbs. of sulphuric acid mixed with water, till the point of the aerometer stands at 41°. (This is made with seven parts of acid at 66°, and five of water equal in weight.) When this mixture becomes very cold it is thrown into the wooden box; four pounds of pulverised sulphate of soda are afterwards added. The two tin boxes, now filled with pure water, are plunged into it. The whole is then placed in a cave, or any other cold place; in about a quarter of an hour afterwards the frigorific mixture is changed; this must be done two or three times, and, in fact, till the water contained in the tin boxes is converted into ice.

The Life of a Medical Man.

BY A. LOUYER VILLERMAY, M.D.P., &c. &c.

Without retracing the repulsive and dangerous studies of the physician, it can be proved that there is not any career which so rapidly wears away the powers of life, because there is no other which requires a greater activity of body and mind. He has to bear the changes of the weather, continual fatigue, irregularity in his repasts, and broken rest; to live in the midst of miasma and contagion; if in the country, to traverse considerable distances on horseback, exposed to wind and storm; to brave all dangers to go to the relief of suffering humanity A fearful truth, for medical men, has been established by the Tables of Mortality of Dr. Casper, published in the *British Review*:—of a thousand members of the medical profession, six hundred died before their sixty-second year; whilst, of persons leading a quiet life, such as agriculturalists or theologians, the mortality is only three hundred and forty-seven. If we take a hundred individuals of each of these classes, forty-three theologians, forty agriculturalists, thirty-five clerks, thirty-two soldiers, will reach their seventieth year. Of a hundred professors of the healing art, twenty-four only will attain that age.—*Journal des Connaissances Medicales.*

Analysis of the Brain.

According to M. Couerbe, the brain, when examined with a powerful microscope, appears to be composed of globules which are slightly elliptical, and are larger in the grey substance than in the white. These globules are coagulable by acids, like those of milk and the

blood, and by a great number of other substances.

M. Couerbe finds in the brain :
1st. A pulverulent yellow fat, *stéaroconote.*
2nd. An elastic yellow fat, *cérancéphalote.*
3rd. A reddish yellow oil, *éléancephol.*
4th. A white fatty matter, *cérebrote.*
5th. Cholesterine, *cholestérote.*

Added to these are the salts found by Vauquelin, lactic acid, sulphur, and phosphorus, which form a part of the fats above named.

Before the brain was submitted to various kinds of treatment, it was deprived of its membranous covering and washed with cold water, in order to separate, as nearly as possible, all the blood with which it is always impregnated; it was then malaxated and digested in cold æther, and all that was soluble in this fluid was dissolved by maceration in repeated portions of it. The first contained but little of the fatty matter in solution; the æther appeared merely to expel the moisture of the brain, and they were separated together by decantation. The second portion of æther was very rich in fatty matter, and contained but slight traces of moisture: four macerations in æther are almost always sufficient to dissolve all the fatty portions of the brain. After treatment with æther, the brain was subjected to the action of boiling alcohol of sp. gr. 0 817 : the boiling solutions were filtered every time, and the boilings were repeated until they gave no precipitate on cooling; there then remained a mere agglomerated fibrous mass, which M. Couerbe calls *névriline.*

The alcoholic solutions were mixed when cold, and filtered to separate the deposit, which was washed with cold æther, in order to separate the fat soluble in this liquid; this is susceptible of crystallising, and perfectly similar to that which is found in the æthereal solution, and which is *cholestérote.*

The powder obtained from the alcohol is very white and pure: it becomes slightly translucid by drying, and has then the appearance of purified wax. The alcohol from which this white powder precipitated, gave more of it by evaporation, mixed with some fatty matter which was separated by æther. The substance dissolved by the alcohol appears to be similar to that described by Vauquelin. M. Couerbe calls it *cérebrote.*

Towards the end of the evaporation of the alcohol, a sort of fluid fat is deposited, which is not the white fatty matter; it dissolves in æther, and is converted into oil during the spontaneous evaporation of that fluid. The alcoholic residue contains only osmazome, a free acid, and some inorganic salts.

The æthereal solution was distilled, in order to obtain the æther as well as the substances which it had dissolved. These were put into a capsule, in order to finish the expulsion of the æther. The fatty matters obtained were in considerable quantity, and in the state of a whitish, homogeneous, adhesive mass, under which there was frequently whitish granular fatty matter, almost entirely formed of cérebrote; this appearance was constant in the brains of healthy persons. This fatty matter was then treated with a small quantity of æther, which dissolved it entirely when free from the whitish granular fatty matter, but only partially when that was present.

This cérebrote is always found in the mass, distinct from other elements which accompany it when extracted from healthy persons; but, on the contrary, sufficiently combined with them to become soluble in a small proportion of æther, when taken from the brain of a maniac.

When, then, æther leaves any white substance, it is separated by the filter, and when æther dissolves it entirely, it is to be evaporated to obtain more of the substance; the residue is to be subjected to the action of boiling alcohol, which dissolves the three fatty matters, among which is the cérebrote, and leaves undissolved a yellow solid fat resembling wax. The substance is almost totally insoluble in alcohol: it is to be washed several times with boiling alcohol to separate extraneous matters. The substance is not yet pure; it contains another peculiar yellow matter that is separated by cold æther, which dissolves the greater part of the mass, and leaves the other portion in the form of a brown powder. By filtering and washing this brown powder with æther, and then evaporating the æthereal solution, both these substances are obtained:

The portion soluble in æther is of a fawn colour: it cannot be sufficiently dried to be pulverised; the other portion is of a lighter colour, readily dries, and is easily reduced to a fine powder by trituration. The first M. Couerbe calls *cérancéphalote,* and the second *stéaroconote.*

When the alcohol, holding the remaining matters in solution, is filtered through animal charcoal, and is exposed to spontaneous evaporation, it deposits a considerable number of crystals, which are very white and have a greasy lustre: they are to be pressed in fine linen, and the alcohol by evaporation furnishes more crystals, which are to be added to the first.

When the alcohol has been weakened by repeated evaporations, it becomes turbid, and yields crystals of the same matter mixed with red oil, which precipitates to the bottom of the vessel; it is difficult to obtain this in a pure state. There often comes down with it some solid matters which give it consistence, and which give it the appearance of fat or even several fatty matters. In order to separate the oil, it must be subjected to a slight pressure in a cloth, and alcohol poured upon it, which leaves the crystals. This alcohol is turbid on account of the oil which it contains. Some æther is to be added to it, which redissolves the oil, and renders the liquor clear,

when exposed to spontaneous evaporation. A part of the æther slowly evaporates; the remainder holds the crystalline matter in solution, and allows the oil, as it is formed, to precipitate to the bottom of the liquid. When the stratum is rather thick, it is to be removed by a pipette and filtered, and it is then pure and reddish. This oil M. Couerbe calls *éléancephol*, or oil of the brain.

As to the very abundant portion of the brain remaining after treatment with æther and alcohol, and which the author calls *névriline*, it is partly composed of albumen, coagulated globules, and of a membranous substance soluble in potash.

Analysis of the preceding Substances.

Cérebrote.—M. Vauquelin appears to have been acquainted with this substance, which he has described under the name of *white fatty matter*, and which has since been called *myclocone* by Kühn; but, according to some of the characters which M. Vauquelin has assigned to his white fatty matter, it seems that he did not obtain it pure, since he says that it is fusible and viscid, whereas cérebrote is infusible, and does not stain paper. When properly dried at a gentle heat it becomes friable, and may be pulverised; it is soluble in boiling alcohol, and but slightly so when it is cold. The process for extracting it is dependent upon this difference. It does not saponify with a solution of potash or soda, a property also observed by Vauquelin.

Cérebrote is composed of

Carbon	67·818
Hydrogen	11·100
Azote	3·399
Sulphur	2·138
Phosphorus	2·332
Oxygen	13·213
	100·

Vauquelin does not mention the existence of sulphur in it.

Cérancéphalote.—This substance is solid, brown, insoluble in alcohol and in water, but dissolved by 25 times its weight of cold æther. It softens by heat, and without becoming perfectly fluid; when dried it is elastic, like caoutchouc. M. Vauquelin has not mentioned this substance, but Kühn appears to have had a glimpse of it. Sulphuric acid attacks it with great difficulty; nitric acid reduces it to its elements, and converts the sulphur and phosphorus into acids.

It is composed of

Carbon	66·362
Hydrogen	10·034
Azote	3·250
Phosphorus	2·544
Sulphur	1·959
Oxygen	15·851
	100·

Stéarconote.—This is a fatty matter, which occurs mixed with the preceding. It is of a fawn colour, infusible and insipid, and by combustion gives an acid charcoal. Neither alcohol nor æther dissolves this substance; both the fixed and volatile oils readily dissolve it. Nitric acid takes it up after slight ebullition, and it re-appears as a white fat, which is acid, soluble in boiling alcohol, and crystallises in small laminæ, similar to margaric and stearic acids.

This substance is composed of

Carbon	59·832
Hydrogen	9·246
Azote	9·352
Phosphorus	2·420
Sulphur	2·030
Oxygen	17·110
	99·990

Eléancephol.—This is a reddish liquor; its taste is disagreeable; it is soluble in æther, fixed and volatile oils, and alcohol, in all proportions. When heated, this substance dissolves the other matters of the brain readily, and these impart consistence to it. Its composition is similar to the preceding.

Cerebral Cholesterine.—A crystallisable fatty matter, which, according to some authors, must be the result of some morbid change. The constant and considerable quantity which M. Couerbe found in the brain induces the belief that is a widely diffused organic animal element. It is well known that MM. Denis and Boudet have found it in the blood. The cerebral cholesterine is perfectly similar to that of biliary calculi. Their analyses gave M. Couerbe the same results:

Carbon	84.895
Hydrogen	12.099
Oxygen	3.006
	100.

This analysis differs a little from that of M. Chevreul, as follows:

Carbon	85.095
Hydrogen	11.880
Oxygen	3.025
	100.

Foreign Hospital Report.

HOSPITAL OF BICETRE.

Extraordinary Diseases of the Nervous System.

Case I.—*Idiotism.*—Richard ——, 17 years of age, of ordinary stature, head extremely small, projecting backwards in the form of a loaf of sugar. The circumference of the head, from the occipital protuberance to the centre of the forehead, seventeen inches nine lines in extent.

The sensitive organs did not present any

notable alteration. The different senses, however, were very imperfect; hearing diffuse; taste and smell gone, the strongest odour not producing the least impression on the olfactory nerves; touch uncertain. The superior extremities, though well formed, could not be directed towards any object without great trembling, and, when they had reached the object, could not seize it without the greatest difficulty.

The attention of this man was directed towards any object with the greatest difficulty. He could not articulate words distinctly; he would repeat "à mort, à Bicêtre, but, like a parrot, know not the signification of the words he repeated.

Nevertheless his attention was not so bad as might at first have been believed. Heedless without to the questions put to him, Richard regarded them, and replied nothing, but, by simplifying the questions and tantalising his appetite, he would reply yes or no, and repeat the last words of the phrase he heard. Frequently, also, he would return to his two favourite words, *à Bicêtre, à mort.* Sometimes he would sing with a remarkable monotony. This man never recollected any person he had seen, he would smile on seeing them, but he would also smile at every person he knew not. Hunger never made him stir from his sleeping chamber, his food was carried to him; he received it, however, eagerly, and would scream if it was taken from him. He passed his water and fæces always wherever he might be, without thinking it in the least improper.

Case II.—An Unknown, stature four feet four inches; head remarkable large; did not present in any other way any thing remarkable. The circumference from the occiput to the centre of the forehead measured twenty inches two lines. The body of the unknown was but slightly developed, and he did not appear more than 14 or 15 years of age. Abdomen of considerable volume; the thorax, on the contrary, presented in every diameter a considerable diminution. In spite of these contractions there was no inconvenience in respiration.

This unknown was both deaf and dumb, and his expressions were sometimes of a musical, and sometimes of a groaning sound. Taste and smell very imperfect. Had not the least sensation either from the most odoriferous or insipid. Touch imperfect, and grasped objects with difficulty; vision somewhat affected.

This man could not recollect places, even with difficulty he could find his bed. He would frequently go to a wrong bed, and still persist it was the same he occupied the night before. He did not appear to have any particular desire for food; if it was presented to him he would carelessly take it, and then put his mouth to his hands, in order to eat it. When quite young this unknown would eat nothing but bread and meat, and reject with apparent rage all other nourishment. When he wanted drink he would pour water from a cup into a saucer, and then place the latter in a cup again. He would show his rage or joy by pinching the fingers of the individual who flattered or worried him. When we went to see him, we found him in almost the last state of emaciation. A short time since he died, and the following are the results of his autopsy.

The cranial walls four or five lines in thickness; the external and internal tables have not participated in this augmentation. The cavity of the cranium is unequally developed on both sides; on the right side there is greater development than on the left, so as to destroy the symmetry of this cavity. The different processes both of the internal and external base of the cranium are also unequally developed.

The dura mater presented no alteration, but in the cavity of the arachnoid there was nearly an ounce of serous sanguinolent fluid.

The convulutions of the brain were numerous, but slightly developed; the cerebral substance appeared infiltrated with serous liquid, which made it of a pappy consistence. The lateral ventricles were of an enormous size, at least four times larger than natural. The septum lucidum was partly torn, but appeared formed of fibrous filaments, so that the ventricles communicated one with the other; the third and fifth ventricles were also dilated; the anterior commissure of the brain soft and torn. The abdominal and thoracic viscera were healthy.

British Hospital Reports.

ST. THOMAS'S HOSPITAL.

General Remarks on the Pathological State of Disease in Latent Pleuritis and Peritonitis. Illustrated by Cases.

The important and numerous investigations that of late years have been made on inflammation attacking the different organs of the economy, have greatly facilitated diagnosis and pathological anatomy; it must also be allowed that it has thrown much light on the intimate phenomena which essentially constitute inflammation, if considered in a general and abstract manner. The increase of blood to an inflamed part, the formation of heat, the alteration to which are submitted the solids and liquids, are yet in mystery which philosophy has not penetrated. On such obscure phenomena then, we will not at present make any remark, but confine ourselves principally to the doctrines of pathologists relative to the pain which accompanies inflammation.

It has been asserted by many celebrated men, that parts sensible in a healthy state may, when in a state of inflammation, become painful, and, in fact, the pain is regarded as constituting one of the general characters of inflammation.

It is admitted by every one, that sensation is confined to the nerves alone, and, according to Sir Charles Bell and Magendie, *sensation* is the property of those nerves taking their origin from the posterior roots of the spinal marrow. According to this doctrine, sensitive organs must cease to possess this, when the communications of the nerves of sensation are detached from them.

It appears to us, then, evident in the first place, that pain is nothing more than an abnormal state of sensibility, a pathological sensibility, if we may be allowed the expression. And as it is demonstrated that on certain nerves depends only sensibility, it is clear that there is some morbid condition of those nerves to which we ought to attribute the pain, and this by every pathologist is acknowledged to be only an exaltation of a portion of sensibility. It appears equally clear, also, that, if we find in the economy parts which do not receive the nerves of sensation, their inflammation is not essentially accompanied with this lesion of sensibility, to which pathologists have given the term pain. It has been proved by many physiologists, that these insensible parts in a normal state exist in a great number, for example, there is the liver, spleen, kidneys, besides, in a word, all serous membranes, &c., there are also many portions of the cerebro-spinal apparatus, and a large portion of the alimentary canal. These parts are stated by the same physiologists to be capable of being burnt, or even lacerated, without the animal manifesting the least pain. Every pathologist of the day recognises the insensibility of these parts. Nevertheless, pathologists make the most striking contradictions. They assert that insensibility of normal parts becomes sensible when in a pathological state, and transform these to accidental symptoms, as if a tissue, when in a diseased condition, was thus enabled to engender a property which did not exist in it in an healthy state.

Thus, for example, they affirm that pains in pleurisy or peritonitis have their essential seat in these membranes. Now, as a part naturally insensible, can it become sensible from an inflammatory condition? In order that such a transformation should take place, the sentient nerves must be suddenly developed, and the membrane thus invested with nerves that it never before received, which, in fact, would be a *physiological miracle*.

It cannot be denied, that both pleuritis and peritonitis exist both with and without pain. It is a common clinical fact, and one which cannot be disputed. We must, however, combat the general explanation given of this by pathologists. If we reflect that the innumerable nervous branches which come from the spine traverse every part of the subcutaneous and subserous tissues—in fact, it is that which gives the skin that exquisite sensibility which it possesses,—if, then, we reflect on this anatomical circumstance, we must be disposed to believe, that in serous inflammations pain depends not on the irritation of the serous tissue, but on the nervous ramifications that are distributed around it.

We will, for a moment, suppose that the subserous nervous fibres do not in the least participate in the irritation of serous membranes. If our argument was just, there would not accompany any pain in the inflammation, and we should have the phenomena precisely as we observe them in indolent or latent peritonitis. It appears extremely probable, that in cases of this kind the serous membranes are exclusively inflamed, which are scarcely ever accompanied with pain. In returning to the subject of these inflamed membranes, pathologists say, that pain in pleuritis or peritonitis belongs essentially to the inflamed parts of these membranes; and, on the other hand, they are obliged to admit that inflammation of these tissues may exist without pain. We evidently have here some contradiction, for two facts are discovered directly opposed to each other. If one be admitted, the other must be erroneous. Now, the latter of these is certainly a fact, viz., the absence of pain in cases of pleuritis and peritonitis. The first fact, then, that pain essentially belongs to peritonitis and pleuritis is evidently untrue. But to what must the pain be attributed when it does exist, if it is not to the irritation of the adjacent nerves in the surrounding inflamed tissues? A number of facts have been collected by pathologists, which bear out this assertion. It is in inflammation of the pleura pulmonalis, or that portion investing the lungs, that there is generally but slight, if any, pain; whilst, on the contrary, inflammation of the pleura costalis is constantly accompanied with the most acute pain; in the latter, then, the irritation may readily extend to the nerves of sensation. Thus, in other serous inflammations, the pain may be easily explained;—the inflammation attacking the parietal portion of the membrane comes nearer in contact with the nerves of sensation than the internal, or organic layer of the membrane, and, consequently, more easily propagates the irritation. We have now, we believe, pretty clearly shown that inflammation of the pleuræ and peritoneum may exist without pain; we may also add, that it is not rare to observe acute pains perfectly resembling those of these membranes, or at least those which generally attend inflammation of these tissues, without these membranes partaking of inflammation. It is these symptoms which so frequently mislead those most skilled in diagnosis. By adding this fact, then, to the preceding, we might almost positively conclude that pain was not an essential symptom of these inflammations. It appears to constitute, on the contrary, a phenomenon added to it, and it appears to us true, that this symptom, when it exists, depends on the transmission of irritation to the nervous branches, which are winding about the surface of the inflamed membrane. By direct observation, we believe, this might be

supported, and it is much more probable than that in the laminous subserous tissues, through which, according to some anatomists, pass the nervous branches, exist the principal seat of serous inflammation.

We can further strengthen our argument, as regards pain, by mentioning that paralysed limbs which have lost all sensitive power may become the seat of a very energetic inflammation. In these cases, then, there cannot, nor does not, exist pain; nevertheless, if pain is an essential symptom of inflammation, it ought, and certain authors advance that inflammation is the direct source of this phenomenon. On the other hand, we may observe the most acute pains in the limbs, without there existing inflammation, or even irritation, unless it is in the nerves of sensation that they are endowed with. These pains are termed neuralgic pains. In phlegmonous inflammation of the limbs, as in serous inflammations, the pain is not an essential or necessary sign of these affections, indeed less so than a simultaneous symptom of irritation of the sensitive nerves, as, in cases in which it takes place, it is frequently found in the immediate contact with the inflammatory abscess; and it morever appears to us, that it is to the presence of these nerves, that in certain cases is owing the intensity of external inflamed parts. Through their medium, in fact, the irritation sometimes extends to the nervous centre, and produces ataxic symptoms which threaten, in almost all cases, the approach of the patient's death.

All that we have advanced on the seat and cause of pain is applicable also to inflammation of internal organs, which possess, correctly speaking, neither sensation nor sensibility. And, as we have before stated, are classed amongst these the liver, spleen, brain, cerebro-spinal apparatus and small intestines *.

Then from the foregoing facts we must draw the following conclusions:—pain is not a sign of every inflammation, therefore it ought not to be placed amongst the essential and common symptoms of this affection. Pain, on the contrary, is the symptom of irritation of an organic element, or nerve of sensation. It does not appear to us a more essential character to inflammation than convulsion; for in the same way may convulsion be supposed to be an idiopathic, or sympathetic, irritation of a nerve of sensation. We might also say, that delirium was also an essential symptom of inflammation, for delirium we believe to be nothing more than some morbid state or lesion of the functions to the cerebral apparatus. It therefore appears to us that pain signifies or indicates nothing more or less than a lesion of a function of a sensitive nerve; and if pain be present in inflammation of different parts, those parts receive nerves of sensibility, which participate in the irritation of the morbid part. Cases of both pleuritis and peritonitis in an indolent or latent state have occurred in St. Thomas's Hospital within the last few months, which prove, to a certain extent, the accuracy of the above argument.

The first case was a woman, admitted under Mr. Travers, with a cancerous condition of both mammæ. The patient, for a few days previous to her death, suffered suddenly from febrile symptoms; her countenance became extremely anxious; pulse small, but vibrating. She did not complain of the least pain, neither from pressure did she suffer any inconvenience. She gradually sunk, without any apparent cause manifesting itself for so speedy a dissolution. At the autopsy, on opening the thorax, the pleura pulmonalis of the left side was found, as it were, plastered with coagulable lymph, which had evidently been recently deposited. In this case the stethoscope was not had recourse to, or else, in all probability the existence of the disease might have been detected.

The other case was admitted under Dr. Williams; it occurred in a man about forty years of age. The disease did not commence with the ordinary train of symptoms which usually accompany inflammation of the serous tissues. There was but slight fever at the commencement; he had, however, neither chilliness nor shivering; his skin became hot; he was very restless. There was no flexion of the thighs upon the abdomen, as is frequently observed in acute or painful peritonitis. The man, after being attacked three days with these symptoms, died, and, upon the autopsy, the whole of the intestinal surface of the peritoneum was found covered with a thick layer of recently-deposited coagulable lymph. In this case the cause of death, previous to the autopsy, remained in a mystery. During his illness, several times pressure was made upon his abdomen, but from which he did not complain of the slightest pain. He was several times asked whether or not he felt pain, to which he always replied in the negative, but simply complained of thirst, and of a sinking sensation, and once or twice he said he felt a weight in the epigastric region.

Thus it may be observed that these cases, though not of any common occurrence, occasionally occur; and, unless the medical attendant is fully on his guard, he most assuredly would be deceived. In cases like the latter it appears almost impossible to detect its presence. This shows the great importance

* The latter fact appears at first sight curious, but, if anatomists are correct, it is easily accounted for, viz. that the large intestines, cæcum, colon, and rectum, receive nerves from the spinal marrow, and the small intestines do not. A celebrated physiologist has stated that this is a special sensibility required by the large intestines, in order to communicate to the will a sensation previous to the evacuation of the rectum, and nature, never doing more than is actually necessary, did not endow the small intestines with the same powers.

of being aware that inflammation may occur without pain; for if the medical man has the least suspicion of its attack, by the free administration of mercury, together with bleeding, he is, in almost all cases, sure to save the life of his patient. We have at the present time two more cases of this affection, when, in another number, we will give them, together with a few hints on the diagnosis of this affection.

WESTMINSTER HOSPITAL.

Wound of the Trachea.

Case I.—Ann Halley, a woman about the middle age, was brought into the Westminster Hospital. Is of the bilious temperament; is married; has been in a desponding way for some time, in consequence of ill treatment on the part of her husband. She cut her throat with a common and rather blunt knife. The incision was about two inches long, dividing the cricoid cartilage: about an inch of the wound was superficial, merely affecting the integuments. The hæmorrhage was principally venous, and had nearly ceased when she was brought in.

Ligatures were at first applied so as to bring the divided parts together, but were soon after removed by the direction of one of the surgeons, and a retaining bandage made use of, similar to that always made use of at this hospital. A flannel bandage was applied around the chest, and a double-headed roller round the head, the packer's knot being employed; the two ends of the bandage were then brought down and fastened to that encircling the thorax, so as to keep the head bent upon the chest and the incised parts in apposition, while at the same time there was free ingress and egress for the air. By this apparatus emphysema is, in the generality of instances, avoided.

For a few days the patient appeared to be doing well; she breathed both by the mouth and wound, and appeared to have rallied from the shock she had sustained. The symptoms, however, changed; those indicating pneumonia made their appearance, and, in spite of the usual remedies, she died.

On examination of the body, there was found effusion of bloody serum to a considerable extent into the right pleural cavity, indications of pleuritis on both sides, and some marks of pneumonia, but not so intense as the inflammation of the pleura. The wound of the throat was between the cricoid cartilage and the trachea.

NORTH LONDON HOSPITAL.

Injurious Effects from the Homœopathic Doctrine.

We have observed in the wards of Dr. Elliotson of this hospital two cases of acute rheumatism, one of which shows the miserable effects of this doctrine, and the other clearly points out the beneficial advantages of rational treatment. It is not our intention here of giving these cases to warn medical men against the absurdity of the doctrine, but simply to show those disbelievers of the medicinal art, that by putting themselves under men, who, ignorant of the aid of medicine, pretend that they can check the progress of disease, while the latter is undermining the constitution, renders the unfortunate patient a miserable object for many months, if not even for life.

The first case was a woman, about 30 years of age, who had suffered from acute articular rheumatism, which she stated came on after getting very wet. She was for some considerable time under one of the celebrated homœopathic doctors, who, after exhausting her pocket, and nearly ruining her constitution, left her in a very hopeless state. About six weeks ago she came to this hospital; at the time of her admission she was in a very emaciated condition, her countenance indicated the greatest anxiety. She complained of pains in her limbs, which had become so aggravated, that she was deprived of all nocturnal rest. Two large sloughing sores were situated opposite to the base of the sacrum, caused from the position in which she had been constantly obliged to lie. On Dr. Elliotson seeing her, he prescribed immediately an hydrostatic bed, and, from her debilitated appearance, ordered tonics, &c., to support her weakened frame. Ever since her admission she has lain in a very precarious state. At the present time she remains in the hospital, and is still obliged to be kept on the water bed. Her strength, though certainly improved, continues to make progress very slowly.

The other case occurred in a man, who suffered also from the most severe articular rheumatism, produced from getting wet. He immediately applied to the hospital, and was admitted during the acute stage of the disease. There were heat, swelling, and redness affecting the knee and ankle joints. The man also suffered from slight febrile symptoms. Bowels generally costive; urine scanty, and high coloured; tongue coated with whitish mucus. Dr. Elliotson, under whose care he was admitted, immediately placed him under an active antiphlogistic treatment. After two or three bleedings, the symptoms gradually decreased; cold water was applied to the affected parts, and, in the course of a fortnight, the man perfectly recovered, and left the hospital apparently in a good state of health.

It is to be remembered that both these cases originated from getting wet. Both patients, previous to the attack, were in a robust state of health. There was nothing, in fact, that could account for the difference of termination, with the exception of a proper treatment for the one, and an absurd, or no treatment, for the other. Is it possible, after so many deaths that occur from quackery, after so many every year are rendered wretched from such treatment, that such murderers are allowed to exist?

APOTHECARIES' HALL.

Names of Gentlemen to whom the Court of Examiners granted Certificates of Qualification on Thursday, Jan. 8, 1835:—Peter Sampson, Manchester; Abraham Crisp Gall, Woodbridge.

MISCELLANY OF FACTS.

Medico-Botanical Society.—Officers elected Jan. 16th, 1835.—President, Earl Stanhope. Treasurer, Henry Cope, Jun. Secretaries, G. G. Sigmond, M.D.; Jas. Cadett, M.D. Librarian, John Toller. Conservator, W. H. Judd. Professor of Botany, G. T. Burnett. Professor of Chemistry, Thomas Everitt. Professor of Toxicology, ———. Professor of Materia Medica, M. Ryan, M.D. Members of the Council—Jas. Bass; Henry Brandreth, Jun.; W. D. Chowne, M.D.; Humphrey Gibbs; G. J. Guthrie; Sir H. Halford, Bart.; W. T. Iliff; Sir James M'Gregor, M.D., Bart.; W. J. Shortt; Anthony White.

Madame Asselin, the widow of a physician who fell a victim to the cholera, brought an action before the Juge de Paix of the sixth arrondissement, for fees due to her husband from a patient whom he had cured of that fearful epidemic; on which the judge expressed his surprise, as he thought medical men were *well enough paid* by the eulogiums in the daily press.

Mr. John Leader, of Mill-street, Co. Cork, has recently given an example which it would be desirable to see more generally imitated. Having received £300 damages at the last Cork Assizes in an issue against a Mr. Orpen, he has appropriated that sum towards the erection of a Fever Hospital in that place.

The Pacha of Egypt has recently subscribed for fifty complete copies of the *Journal des Connoissances Medico-Chirurgicales*. It is the intention of the celebrated physician Clot Bey to translate the work into Arabic. These two facts offer a new indication of the tendency of the government of Mehemed Ali towards naturalising in Egypt the progress made by Europe in the arts and sciences.

The apothecaries and chemists in the department of the Haute Garonne, in France, united, at a general assembly at Thoulouse, have drawn up a petition, which will be laid before the two Legislative Chambers, on the abuses from which pharmacy in general suffers. The object of the petition is to request an amelioration of the law which at present controls the practisers of it.

On Monday fortnight his Majesty visited the German Spa at Brighton, attended by the Duke of Richmond and Lord Western, and were met by most of the eminent professional medical practitioners of the town, amongst whom were Sir M. J. Tierney, Drs. Price, Drever, King, and Todd. The object of his Majesty's visit was to inspect the machinery and to witness the manufacture of the factitious mineral waters. His Majesty was much pleased, and signified his desire to patronise and promote, by his influence, the establishment.

We observe, in the *Gazette des Hôpitaux*, that the cholera has again made its appearance at Versailles. A very few cases have terminated fatally. It has been remarked by the medical men in the neighbourhood, that the disease has not commenced in its ordinary dreadful form, neither have those affected suffered from the violent cramp which usually attends this disease. The prominent symptoms are rice-water evacuations, accompanied with vomiting, with the common integumentary fever. In the Turkish capital, during the late invasion of cholera, its character showed a remarkable contrast; 70,000 persons had died in a short period.

APPOINTMENTS.

Naval.—A. S. Allen, M.D., (1828), to be surg. to the Spitfire. J. Sellick and J. Palmer to be assist.-surgeons to the Victory. Thos. Gibson, surgeon to the Scylla. J. Dunlop (1833), surgeon to the Jaseur. W. M. M'Clure (1831), surgeon to the Belvidera. R. Arnott, to be assistant-surgeon to the Spitfire, J. Sinclair (*b*), M.D., to be assistant-surgeon to the Pelican. Thomas Hunter (*b*), assist.-surgeon to the Scylla. K. Ballard (1823), assistant-surgeon to the Blazer. F. Osborne, assistant-surgeon to the Columbia. W. Bayne (1830), assistant-surgeon to the Firefly. D. Wikes (1828), assistant-surgeon to the Flamer. C. A. Air (1830), assistant-surgeon to the Lyra. C. Conyngham (1829), assistant-surgeon to the Scorpion.

Military.—Staff Assistant-Surgeon F. Barnett, M.D., to be assistant-surgeon to the 46th reg. v. Smith, appointed to the Royal Military Asylum. Apothecary J. W. Simpson, from the half-pay, to be apothecary to the Forces, v. Shower, deceased. Mr. R. J. O'Flaherty has been appointed assistant-surgeon to the Forces, v. Barnett, appointed to the 46th reg.

General.—Dr. Fitzgerald, superintendent of Bruff Dispensary, Co. Limerick. Mr. Thos. Kane, surgeon to the New Dispensary of Cratloe, Co. Clare. Mr. H. Franklin, surgeon to the County Recruiting District. Dr. J. Fitzgerald, physician to the Knockany Dispensary, Co. Limerick.

Resignations.—Mr. Stubbs, of the Birmingham and Dcritend Self-Supporting Dispensary. Mr. T. R. Colbrook, surgeon of the Hertford General Infirmary.

DEATHS.

At Beldoyle, Surgeon Mark Thompson, R.N. Mr. John Anderson, of Prince's-street, Glasgow, surgeon. Mr. W. Godwin Eames, of Castlemartyr, Co. Cork, surgeon. Dr. James Home, of Roxburgh-place, Edinburgh.

BOOKS RECEIVED.

Edinburgh Medical and Surgical Journal. Jan.
Medico-Chirurgical Review. January.
Medical Quarterly Review. January.
Dublin Journal of Medical and Chemical Science. January.

CORRESPONDENTS.

We have received from several parties communications questioning the authenticity of the letters of Drs. Graves and Stokes, published in our last number. As a general answer, to convince all disbelievers, we have left the letters at our publisher's, where they may inspect them at any time they please. Our correspondents, we imagine, will be further astounded in perusing another letter from Dr. Stokes, published in the present number, the truth of which they may also ascertain through the same channel.

We will with pleasure insert the communication of *Dr. Harrison*, if he will be kind enough to send it in a more concise and abbreviated form.

We are fearful many of our correspondents will think us negligent in not replying to their communications. In truth, the abundance of interesting matter we are continually receiving for the last page of this Journal prevents us from doing either them or ourselves on that score justice.

All Communications and Books for Review to be forwarded (free of expense) to the Publisher, 356, Strand, near King's College.

THE

London Medical and Surgical Journal.

No. 156. SATURDAY, JANUARY 24, 1835. VOL. VI.

LECTURES

INTRODUCTORY TO THE COURSE OF THE

INSTITUTES OF MEDICINE,

DELIVERED BY

ROBERT J. GRAVES, M.D.,

King's Professor, Dublin.

LECTURE VII.

GENTLEMEN,—I have now laid before you a brief sketch of the physiological history of man, as connected with the peculiarities of his form and structure, and have shown that a comparison of his skeleton with those of all other animals of the same class, proves that he alone is by nature a biped, and destined to walk erect. I have spoken also of the comparatively great development of the cerebrum, the seat of the intellectual powers, which pre-eminently distinguishes him, and directed your attention to those faculties which mark the first dawn of mind, and which, for a wise purpose, predominate during the periods of infancy, childhood, and youth, conferring on the young a stock of fresh and vivid ideas, and enriching the stores of growing knowledge. I told you it was reason alone that gave man his lofty and commanding position among his fellow animals, and enlarged on the fact of his being pre-eminently a speaking animal, destined to invent and cultivate language, and prompted by natural instinct, as well as by physical conformation, to form articulate sounds. I concluded by expressing my belief that languages are not entirely traditional, that they are constantly changing, and only preserve a permanent character where a fixed written standard exists, and that, if all languages were suddenly lost, we should, in the course of time have their places supplied by others, some of which would exhibit a considerable degree of cultivation.

With respect to grammar, it always accompanies each form of invented speech as a necessary result, being, if I may so express myself, the skeleton of language. And here some important views occur to the physiologist concerning the human mind, and the nature of language, as connected with the subject of education. In my last lecture I endeavoured to trace the relative progress and development of the mental faculties from infancy to puberty, and showed that in the earlier periods of life the faculties chiefly connected with perception, as attention, curiosity, and a memory for names and things, were predominant. Now according to the old mode of education, the order of nature was almost completely reversed; qualities were supposed to exist which were, as yet, quite undeveloped, and those actually existing, and even in a state of considerable perfection, were not cultivated. It is, nevertheless, sufficiently obvious that in endeavouring to educate youth, we are not pursuing a physiological plan, when we make the attempt without having accurately ascertained by observation and study the faculties which distinguish the different periods of childhood and youth, and their peculiar adaptation to the various branches of science and literature. In youth, when the perception is quick, the curiosity ardent, and the memory good, the mind should be directed to the study of the physical qualities of things and the accumulation of names, and hence natural history, biography, history, languages, and geography, should be the employment of youth. Every species of knowledge which requires for its attainment perception, imitation, attention, curiosity, and memory (faculties which are all enjoyed by the child in a very remarkable degree), may be now communicated with facility. This, too, is above all others, the period for cultivating the discipline and education of those mysterious and powerful springs of human action, the passions and affections. Languages, however, are not to be taught by commencing with the philosophical part, which is grammar. They should be taught in the same way as a child acquires a knowledge of its own language; a stock of words and phrases should be learned and fixed in the memory by repetition, reserving the study of grammar and syntax for a more advanced period. The practical precepts of grammar may be sufficiently enforced by judicious and well selected examples, but we should never attempt to involve a child in the useless and perplexing task of studying the

ultimate analysis of language. This is the natural and the most successful mode of teaching languages, and yet how generally do we find an opposite plan pursued? The moment a child begins to learn a language, a grammar is put into his hands, he is dragged through a maze of abstract terms and unintelligible definitions, and is required to understand and explain the complex and subtile nature of verbs, pronouns, prepositions, and conjunctions. He next proceeds to the study of syntax; he is now required to explain all the difficulties connected with the concord, government, and mutual relations of words, he is expected to be able to understand all the intricacies of grammatical abstractions, an expectation supposed to be fulfilled when the suffering scholar has learned a certain number of rules by rote, which he can mechanically apply for the explanation of grammatical construction. This is termed *parsing*, which a boy may learn to perform, much to the credit of his master and the edification of the spectators, while all the while he understands as little about the matter as one of Babbage's machines, which, however, performs calculations much more difficult.

The consequence of this unphilosophical mode of proceeding is that young minds are frequently disgusted at the very threshold of knowledge and take a dislike to learning, which it often requires years to remove, and many have given up in despair every notion of acquiring the ordinary scholastic attainments, and have become permanent and incurable dunces. It is for this reason that I think our whole present system of education should undergo a revision. Something, however, has been done, and I may observe here that the mode of teaching languages introduced by Mr. Hamilton is a great improvement. But it appears that not only the present mode of teaching languages, but also the whole system of educating boys until they arrive at that period when they are destined to commence the active business of life, requires to be changed. In fact, too much of the traditional and monastic system still prevails in our grammar schools and colleges, and too many of our modes of communicating and acquiring knowledge have been derived from the darker ages. The province of the physiologist, however, is limited to pointing out the successive steps which mark the progress of the human intellect, it is for others to adapt and regulate that intellect in the acquisition of the various branches of knowledge and science.

A change in education, such as is here referred to, has been of late almost universally adopted by that utilitarian and wise nation, the North Americans. With them a knowledge of words is only considered useful so far as it contributes to enlarge our knowledge of things. Languages are, as it were, keys to be employed in opening certain chests containing treasure, but they do not constitute the treasure itself, and yet how many school and college men walk about vainly displaying the variety and number of the keys they have by great labour acquired, and how many are, consequently, looked up to as learned, who have, nevertheless, spent their whole lives in getting means of access to knowledge which they never even attempt to profit by. Such persons are too often ignorant of nature and nature's works, and, consequently, are too often narrow-minded pedants, who excuse ignorance of facts much more readily than a fault committed against the rules of grammar and prosody. The mispronunciation of a Latin word in a classical quotation has at once closed the ears of the British senators against the voice of a man speaking sensibly on a subject of national importance! And yet were our best reputed Oxford Latinist to read aloud a passage of Tully's Offices before a suddenly resuscitated jury of Romans, the verdict would be "*totally unintelligible*," although Cicero himself were the foreman.

Having spoken of the intellectual faculties of man, and his distinguishing attribute, reason, we next come to compare them with those possessed by other animals. "The intellectual faculties possessed in a certain degree by the higher orders of animals are, perception, memory, the association of ideas, imagination, volition, and reasoning. Cuvier enumerates the power of abstraction; one privileged being, man, has the power of associating general ideas with particular images more or less arbitrary, which are easily fixed in the memory, and which serve him to recal the general ideas that they represent; these associated images are what are called signs, collectively they form a language." This power of speaking, writing, and printing, raises man far above all other animals. They are the chief engines employed in promoting the spread of knowledge, and rendering it fixed and certain, as has been already explained when speaking of the disadvantages attendant on the deprivation of hearing and sight.

"Though the most perfect animals are infinitely below man in the excellence of their intellectual faculties, it is nevertheless certain that their understanding leads them to perform actions of the same kind. They move in consequence of the sensations they receive; they are susceptible of durable affections; they acquire a certain knowledge of things by experience, according to which they conduct themselves (any one who has observed the training of the dog and other animals will easily fill up this illustration), independently of actual pain or pleasure, by the sole foresight of consequences. In a domestic state they feel their subordination, and know that the being who punishes them is free to do so or not. They assume a supplicating air when they feel themselves culpable, or know that their master is angry; they improve or deteriorate in the society of man; they are susceptible of emulation and jealousy; they have among themselves a natural language, which

is indeed only the expression of their present sensations; but man teaches them a much more complicated language, by which he makes them know his will and execute it."

A remarkable instance of the effect of habitual obedience to certain words of command was exhibited by Mr. Cross's elephant at Exeter Change, at a time the animal was in a state of frenzy, and the object of attack with fire-arms. "It is singular that, though in this deranged state, he sometimes recognised Cartmills' usual cry of 'Chunee! Chunee?' by sounds with which he was accustomed to answer the call, and that more than once, when Cartmill called out 'Bite, Chunee! bite!' which was his ordinary command to the elephant to kneel, he actually knelt, and in this position received the balls in the part particularly desired to be aimed at. Cartmill, though one of his assailants, kept himself, therefore, as much as possible out of view, in order that his voice might retain its wonted ascendancy. When this same elephant was previously unwell he exhibited the following example of reasoning powers. He had taken medicine disguised in various articles of food, and had become very suspicious of every thing offered to him. On Monday some warm ale was presented to him in a bucket, for the purpose of assisting the operation of the calomel, but he would not touch it until his keeper drank a portion of the liquor, when he readily took it."

I may cite this elephant as having exhibited a remarkable proof of the truth of what I asserted in a former lecture concerning the luminous appearance of the eyes of animals;—"In his fury, Mr. Cross says that his eyes glared like lenses of glass with a red and burning light." Surely in so dark a place this light could not have been the produce of mere reflection.

"We perceive, indeed, in the superior animals a certain degree of reasoning, with all its effects good or bad, which *seems* to be nearly the same as that of infants before they have learned to speak. In proportion as we descend to animals removed from man, the intellectual faculties become weaker, and in the last classes they finish, by being reduced to signs of sensibility, which are sometimes equivocal, that is, to certain feeble motions to escape pain; the degrees between the two extremes are infinite."

Here we perceive, that just as the body of man, during its growth and development, rises as it were through steps analogous to those which are observed in the ascending scale of animal existence, so the mental faculties rise from the time of infantile life gradually but rapidly, and that at the earliest period, before the child has learned to speak, the mental faculties developed do not appear to be much superior to those possessed by animals which we look upon as sagacious.

"But there exists in a great number of animals a faculty different from intelligence, and which we call *instinct*. This makes them perform certain actions necessary to the preservation of the species, but often altogether foreign to the apparent wants of the individual, and often also extremely complicated. We cannot attribute these actions to intelligence, without supposing a degree of foresight and understanding infinitely superior to what we can admit in the species that perform them. The actions performed by instinct are not the effects of imitation, for the individuals that execute them have, in many instances, never seen them done by others; they bear no proportion to the common intelligence of the species, but become more singular, more skilful, more disinterested, in proportion as the animals belong to the less elevated classes, and are, in other respects, most stupid. They are so much the property of the species, that all the individuals perform them in the same manner without any improvement."

"Thus, working bees have, since the beginning of the world, constructed the most ingenious edifices, agreeable to principles of the highest geometry, and destined to lodge and nourish a posterity which is not even their own. Solitary bees and wasps also form very complicated nests for their eggs. From the egg there springs a worm, which has never seen its mother, which does not know the structure of the prison in which it is enclosed; but when once it is changed into a wasp or bee it constructs a similar nest, equally perfect, for its own egg."

"We cannot," says Cuvier, "form a clear idea of instinct but by admitting that the animals endowed with it have, in the sensorium, continued *innate* sensations and images, which determine them to act like sensations received through the organs of sense. Instinct is a kind of dream or vision, that perpetually haunts them, and prompts them to action; and in every thing that respects their instinctive motions, we may regard animals *as a kind of somnambulists*. Instinct has been granted to animals as a supplement to intelligence, to concur, together with their strength and fecundity, in the preservation of each species in their due proportions. There are no visible marks of instinct in the animal conformation; but intelligence, as far as we can observe, is in constant proportion to the relative size of the brain, and particularly to that of its two hemispheres *."

In the concluding remark of M. Cuvier, we are furnished with a very striking mark of difference between instinct and intellect. There are no visible or appreciable marks of instinct in the structure of animals but we find intelligence bearing a constant proportion to the relative size of the brain, and particularly to

* The reader is referred to Griffiths' "Animal Kingdom" (translated from M. Cuvier's work), vol. iii. p. 360, et seq., for an excellent dissertation on the mental powers and instinct of animals.

that of the two hemispheres of the cerebrum. Anatomists who have studied the subject with great attention, have never been able to point out any part of the nervous system in animals as indicative of a higher or lower degree of instinct. Whereas anatomy has succeeded in establishing, in the most satisfactory manner, that there is always a constant and intimate connexion between the size of the cerebrum and the development of the intellectual faculties.

With respect to instinct, it is important to observe, that animals in consequence of it not unfrequently make very curious mistakes. For instance, flies have the instinct of depositing their ova in places where they shall have plenty of food when they arrive at the maggot state, and hence they generally deposit them on flesh, particularly if it happens to be somewhat tainted. Now there are certain species of flowers (as, for example, the Rafflesia Arnoldi, which is a native of Sumatra, and grows to an enormous size) which have a smell of carrion; on these the flies, deceived by their instinct, deposit their eggs, which, when they become maggots, perish from want of food. The same thing occurs in the case of the musca vomitoria, with respect to various species of phalli and agaraci, which you are aware possess much of the odour of dead flesh, leading to similar mistakes. We also observe that two instincts, having different objects, sometimes become opposed to each other, and under these circumstances the stronger always prevails. This is not uncommon among swallows, which have been frequently observed to build their nests at a late period of the season, and near the time when they make their usual migrations from this country. Here the young ones are hatched too late, and the instinct to migrate being stronger than that which prompts them to cherish their young, the latter are forsaken, and perish for want of food.

I have dwelt on the peculiarities of instinct, and the difference between it and reason or intelligence, because the subject is closely connected with the nature of man, which, as you are all aware, is a compound made up of instinct and reason. As our bodies embrace in their constitution tissues analogous to those which enter into the structure of the different classes of inferior animals, so the mind of man comprises not only the intellect and reason peculiar to himself, but also possesses instincts similar in nature but differing in quality from those enjoyed by other animals. Locke, in his well-known work on the Human Understanding, was the first who pointed out in a clear and forcible manner how much man is the creature of external impressions, and how deeply he is indebted to the senses for the knowledge he possesses. He has compared the mind of man at its dawning to a sheet of white paper, prepared to receive any impressions, but containing none. This is no doubt a correct view of the case, but I think, in making this assertion, he went a little too far, for although no instinctive feelings or emotions could display themselves until impressions had been received from without, until ideas had been formed, still these impressions and ideas are not subjected merely to operations guided by reason, for they also become the subject matter of another very important class of operations, viz. those depending on the agency of innate feelings, and instinctive propensities. The latter are in some instances but little connected with mind, although they require the exercise of volition, and consequently they may be termed organic or bodily instincts, e. g., those which preside over the acts of sucking, swallowing, &c.

Instinct then, comprising innate propensities and passions, makes up a great portion of man's nature, and is one of the most powerful springs of human action; hence an intimate acquaintance with this agent, under its different phases and modifications, is essentially necessary to the teachers of youth as well as the rulers of nations. Thus man is by instinct a *hunting animal*. This affords an explanation of the pleasure he feels in indulging in the sports of the field. It is not merely because he delights in fresh air and enlivening exercise that he fishes or shoots, or joins in the more active labour of the chase, but because the pursuit of prey is one of his earliest and strongest instincts. Man is and has been a hunting animal in all ages, from Nimrod down to Osbaldistone. He breaks from his slumbers long before dawn, he watches through the long and cheerless night, he encounters the most extraordinary fatigue, he disregards the calls of hunger, and risks comfort, health, and frequently life itself, in the pursuit of this favourite amusement. Hunting was one of the modes of providing food given him by nature before reason and accident taught him the other and preferable mode of cultivating the earth; but although the plenty which agriculture sheds round him renders him independent of the chase for his supply of food, still man remains a hunting animal, and no change of circumstances has been able to damage or wear out one of the strongest and earliest instincts of his nature. This is exemplified by the difficulty, almost amounting to an impossibility, which persons many years engaged in American hunting have experienced, in endeavouring again to conform to the usages and habits of a civilised and agricultural society. How often has the dictation of a natural instinct, long gratified, forced them again to the back woods and wild savannahs, how often has it impelled such persons to break the strongest social bonds.

Man is by instinct *a fighting animal*. The child scratches in the nursery, the boy boxes at school, and grown up gentlemen settle their differences with the pistol. The clan has its foray, the district its feuds, and the nation its battles. This propensity explains the occurrence of wars, and the admiration with which

mankind looks upon those heroes who have distinguished themselves by the destruction of thousands. The Roman circus rang with acclamations when the last life blood welled from the side of the dying gladiator. In this country we do not carry our love for the amusement so far; we content ourselves with shouting at a cock or dog fight, a match of pugilism, or a bull-bait. There are also, besides man, hundreds of animals in whose nature there exists an instinctive tendency to fight. Certain tribes of ants march very considerable distances to fight on the ground intervening between their hive-hills, and carry on the combat with great valour and pertinacity, until victory declaring for one side forces the other to quit the well contested field, encumbered by the bodies of the dead and dying. The same thing may be observed in many other species of animals. This propensity to fight has (in the case of man) hitherto withstood more than any other all the efforts of reason; but the rulers and educators of mankind, at the same time that they are aware that the passion is instinctive, should recollect that it is not beyond the limits of possibility that reason may hereafter gain a mastery over it more or less complete. I am not sanguine enough indeed to indulge in dreams of human perfectibility, or to think it probable that a time will ever arrive when peace shall permanently prevail among the nations of the earth. Constituted as human nature is by a wise and beneficent Providence, we cannot bring ourselves to believe that this warring tendency of man has been given to him without a specific object. Indeed it may be doubted whether danger from without is not essentially necessary to the formation of the social fabric; it may be doubted whether obedience and subordination to the laws and constituted authorities, so essential to the welfare of civilised man, could ever have been attained, had they not been rendered necessary, in the first instance, by the fear of foreign enemies.

Man possesses not only the instincts for hunting and fighting but also many others equally remarkable, and some of them of perhaps equal importance. Thus, for instance, he is a *king-making animal.* In this he is not singular, for many tribes of animals adopt a form of government, sometimes despotic, sometimes mixed, sometimes democratic. Man has a strong tendency to look up to some superior power, and a natural propensity, unless guided and directed by reason and experience, to delegate to some other being of his kind a control over him more or less despotic. Here again education should interfere, and should point out how far this tendency should be checked or encouraged; suppressed or extinguished it never can be, so deeply and inseparably is it blended with our natures. This instinct in man will ever render a purely republican form of government, if not absolutely unattainable, at least very precarious as to existence; as society becomes more generally educated reason is strengthened, and many of our instincts can more readily be suppressed, or modified, and consequently we may look forward to the period when constitutional governments may be more generally applicable than they are at the present moment. Still, however, open admission to the deliberative assembly may be, a fixed and unchangeable head of the executive will be, always required, be he called King or be he called President. The United States of America enjoy a wisely constituted government, but they do not form a republic.

Again, man is an animal possessed of a powerful instinct to ornament himself, and to attract the attention of his fellows by various external decorations. This, gentlemen, is a passion strong in every one of us, whether the savage, who prides himself in his tattooing, or the New Zealand chief, who disfigures his face with linear incisions, or the red Indian, who considers the ring in his nose as the symbol of nobility, or the military man arrayed in all the glories of feathers and gold lace, or the fine lady in the fantastic creations of Parisian millinery. It is the love of admiration that gives the common impulse to all; this is the reason why the savage barters his gold for beads and ostrich feathers, and why the soldier sheds his blood like water for an iron cross, or a silver medal. It is this which makes the courtier sigh for a ribbon, or a star, or a garter, and the citizen gaze with admiration and awe at the cocked hat of the sheriff, and gilded coach of the lord mayor. All these are instincts implanted in our nature for a good purpose, but requiring the guidance of reason to render them available. Shallow philosophers and well-meaning but injudicious moralists have descanted most copiously upon these weaknesses, these faults, these blemishes of the human nature. It is, indeed, the duty of reason, of religion, and of philosophy, to control them by means of example, of government, and of education; but were we to succeed in banishing from the human breast all those faults, could we at once extirpate all these weaknesses,—vice might indeed be exterminated, but what would become of virtue? It is the same with the moral configuration of man as with his bodily; it is the same with his mind as with the general constitution of nature's works upon the earth. What spot upon the surface of this globe enjoys an immunity from the occasional effects of elemental strife? What animal that is not subject to various diseases, numerous and often fatal casualties, and lastly to death? And yet who arraigns Providence, who dares assert that the constitution of the earth is imperfect? Who will contend that animals could have been created in such a manner as to unite with the happiness they now enjoy a lesser degree of suffering? So it is with the moral disposition of man, so it is with his mind, so it is with his body. Were his moral defects erased their

opposing virtues would receive no strength from exercise, no confirmation from an approving conscience, no reverence from cotemporaries or posterity. How could benevolence find occupation were all alike good and prosperous? Where could charity satisfy her longings were all free from mental or bodily suffering, were all equally independent of consolation? But I must not, gentlemen, allow myself to be carried away by a subject which, however attractive, can scarcely be accounted one which it is my province to discuss.

There are many, very many, instincts, natural feelings, tendencies, or innate passions which exercise a most important influence on the well-being of man, and distinguish him from all other animals. Among these that tendency existing in the human breast to revere a Superior Being, and which exerts such powerful effects upon society, requires a passing notice. This tendency occurs in people the most uncivilised and barbarous, and gives rise to various forms of worship, some, indeed, so concealed, so vague, or slight, that travellers have been frequently deceived, and have been led to propagate the ill-founded opinion, that such a thing exists as a society of men totally destitute of any shadow of religion, of all the feelings planted by Divine Providence in the human heart. This exerts an influence on the species at once the most necessary and the most beneficial. As time will not permit me to enlarge on the nature or effects of the other instincts with which man is endowed, I shall conclude by speaking of one of paramount importance, viz. that tendency which renders masses of mankind liable to be suddenly affected by the same passion, and which may be termed the *instinct of sympathy, or of imitation*. The author of the article Britain, in the Encyclopædia Britannica, has spoken so pertinently on this subject, in describing the effects of one variety of this passion, that I shall take the liberty of reading out the passage.

"There is a passion of the human mind, *to which philosophers have not yet given a name*, which at times remains dormant for ages, but which, when kindled into action, seldom fails to alter the whole face of society. This is the passion, or rage, for reforming the world, or for propagating that which, under the influence of this sentiment, appears good for the human race, or just, or right with regard to society at large. In the regions of Asia, under the Arabian prophet, it assumed the form of a zeal for religious truth, or a passion to destroy every form of idolatry, and to bring mankind to the worship of one God. Supported by the energy which this passion inspired, and the *contagious* frenzy which it communicated, the Mahometan faith was conveyed from the Arabic Gulf to the banks of the Ganges, the deserts of Tartary and of Africa.

"*The same passion* has, in Europe, at different times assumed the form of a zeal for freedom and of religious enthusiasm. At the time of the Reformation it chiefly appeared under the aspect of a desire to accomplish religious reform. In those countries which, like England, were vigorously governed, and where the prince and the people concurred in the same object, the zeal of the multitude was restrained, and the Reformation was not carried to extremes; but where the populace led the way, as in Scotland, Geneva, and other places, the Reformation was destructive to all ancient religious institutions. When the passion for Reform, after two centuries of internal tranquillity, was communicated to the French nation it assumed the shape of a zeal for freedom, and religion was treated with contempt. The passion, however, was the same that had formerly induced the European States to engage in sanguinary wars for the support or overthrow of their religious establishments; in both cases the followers of the new sect were filled with enthusiastic notions of their own power and their own worth, with visionary schemes of impracticable improvements, and with complete impatience of opposition, accompanied with an eager zeal for making proselytes. *Like other social passions, its contagion rapidly flew from city to city*, and, in a lesser or greater degree, it extended to the utmost limits of Europe. * * * * As it is the nature of the human mind, when its attention is exclusively occupied on any subject, to proceed to extremes, new notions were daily broached in England, or imported from the volcanic region of France; one notion in particular was extremely prevalent, that of the boundless perfectibility of the human mind, which is so true in theory but so false in fact; which, in the hands of Providence seems to be gradually but surely going forward, but which has never failed to cover with confusion all those who have hitherto attempted to act upon it as a present and existing reality. At this period, however, this notion gained singular favour; all imagined that the period was arrived when mankind, become rational and just, were no longer to engage in sanguinary wars of ambition, when good sense alone was to rule the world, and when the public business of society, reduced to the narrow limits of administering justice and of constructing roads and harbours, might be conducted with little trouble, and without the establishment of king and nobles and different ranks and orders of men, or the display of military force for the maintenance of tranquillity. As these notions appeared extremely favourable to the common people, they entered into them with much eagerness, and thus contributed to give them a greater appearance of practicability; a sort of general delirium upon political subjects prevailed, and mankind were led to believe that the greatest changes in the order of society might be accomplished with facility and safety."

A most remarkable and instructive instance of the effects produced by the instinct of imitation, is recorded by an able writer on New

England, who says that, "in 1692, there lived in a town of New England, called Salem, two young women who were subject to convulsions, accompanied with extraordinary symptoms. Their father, minister of the church, thought that they were bewitched, and having in consequence cast his suspicions on an Indian girl who lived in his house, he compelled her by hard treatment to confess that she was a witch. Other women upon hearing this immediately believed that the convulsions which proceeded only from the nature of their sex were owing to the same cause. Three citizens, casually named, were immediately thrown into prison, accused of witchcraft, hanged, and their bodies left exposed to wild beasts and birds of prey. A few days after, sixteen other persons, together with a counsellor, who, because he refused to plead against them, was supposed to share in their guilt, suffered in the same way. From this instant the imagination of the multitude was inflamed with these horrid and gloomy scenes. Children of ten years of age were put to death, young girls were stripped naked, and the marks of witchcraft searched for upon their bodies with most indecent curiosity; and those spots of the scurvy which age impresses on the bodies of old men were taken for evident signs of the infernal power. In default of these, torments were employed to extort confessions dictated by the executioners themselves. If the magistrates, tired out with executions, refused to punish, they were themselves accused of the crime they tolerated, and the very ministers of religion raised witnesses against them, who made them forfeit their lives for their humanity. Dreams, apparitions, terror, and consternation of every kind increased these prodigies of consternation and horror; the prisons were filled, the gibbets left standing, and all the citizens involved in gloomy apprehensions. The most prudent quitted a country stained with the blood of its inhabitants, and nothing less than the total and immediate subversion of the colony was expected, when, as on a sudden, all eyes were opened at once, and the excess of the evil awakened the mind which at first it had stupefied. Bitter and painful remorse was the immediate consequence; the mercy of God was implored by a general fast, and public prayers were offered up to ask forgiveness. Posterity will probably never know the cause or remedy of this dreadful disorder. It had, perhaps, its origin in the melancholy which those persecuted enthusiasts had brought with them from their own country, and which had gained fresh strength from the fatigues of the voyage and the hardships inseparable from a change of climate and manners of living. *The contagion however ceased, like all other epidemical disorders, exhausted by its very communication.* A perfect calm succeeded this agitation, and the puritans of New England have never since been seized with so gloomy a fit of enthusiasm."

Here, gentlemen, we have a remarkable instance of a nation being seized with madness upon one subject. Examples of *national monomania*, arising from the overwhelming interest attached to a particular subject through the intervention of an enthusiasm generated in some individual or small part of the community, whether by design or accident, and rapidly diffused by means of the instinct of imitation; examples, I say, of such national monomania are of frequent occurrence in history. Were not the facts connected with the celebrated *South Sea Scheme*, in 1721, well attested by indubitable evidence, posterity would be slow to believe that a people, habitually so cautious in pecuniary concerns as the English, could have been swindled with such facility. An imaginary stock was created, and a certain value attached to the shares by the authors of the scheme. The whole nation, infected by the spirit of avaricious enterprise, crowded to purchase, and, in a short time, the price of shares had increased ten-fold. At length, the strength of the monomaniacal excitement beginning to diminish, the light of cool reason again reappeared, and behold a nation, which yesterday hailed with enthusiastic joy the near approach of imaginary wealth, is now filled with the ravings of disappointment and the madness of despair.

Did time permit, we might with advantage study the workings of the instinct of imitation, as displayed in producing the monomania which affected the whole of the Christian world at the period of the crusades, a monomania whose force changed the fashion and architecture of the social edifice, and wrought effects which permanently altered the condition of European nations. It would appear, indeed, that, under the influence of the imitative instinct, we become capable of achievements otherwise far above our strength, and, consequently, that Providence has ordained this means as suitable to effect great ends, by stimulating mankind to acts of which they would be otherwise incapable. It is true that the moral storm thus excited often seems to do nothing but destroy, the land is everywhere covered with ruins, and the succeeding generation is reared amidst the wreck, astonished at the madness of their fathers. A more careful observation of the scene of desolation will, however, detect the sources of future good; prejudices and institutions which stood in the way of improvement have fallen before the shock, while the temporary enthusiasm that caused so many evils has often served, when properly directed, to enlarge in an unhoped-for manner the bounds of human knowledge.

Note.—Since this lecture was delivered, a remarkable, but, it is to hoped, a temporary monomania has operated upon the mass of householders in London; I refer to the City elections in general, and not to that of Finsbury. For a justification of the local patriotism of that district, *vide Lancet, passim.*

LECTURES
ON
MIDWIFERY & THE DISEASES OF WOMEN AND CHILDREN,

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Delivered at St. Thomas's Hospital.

LECTURE XV.

Signs of Pregnancy.

Gentlemen, — In considering the changes which are observed after conception, one of the most remarkable which takes place, and which appears with the greatest uniformity, is the *cessation of the menstrual discharge;* but even this sign is far from being infallible. You are well aware how frequently it is interrupted, although perfectly independent of pregnancy; nor are there wanting well authenticated facts to prove the possibility of a woman's menstruating during the first months of her pregnancy; there are even cases on record where females have never menstruated *but at this period*, a proof how necessary it is to use the utmost caution in forming our diagnosis on such points, more especially in the cases of unmarried females. The fact of a woman menstruating during the first three or four months of pregnancy is by no means so uncommon as some have imagined; I have myself met with repeated well-marked and authentic instances of it. Dionis, who was so well aware of this fact that he devotes the 12th chapter of his Second Book almost entirely to the consideration of it, says, "Women of a sanguine complexion, who form more blood every month than is necessary for the nourishment of the fœtus whilst it is small, discharge the overplus by the vessels which open into the vagina during the first months. They that menstruate from the time they conceive till the end of gestation, are generally such as live well and lead an inactive life." "Should the vessels of the cervix uteri take upon them the secretion of the menses, this discharge can thus continue throughout pregnancy*. Again; Levret observes, that in pregnancy "the menstrual blood is more pale and sparing: it usually comes from the hæmorrhoidal vessels of the vagina, or at most from those of the cervix uteri." Mauriceau supports the same view.—"I know," says he, "a woman who had four or five living children, and who had with every child her menses from month to month as at other times, only in little less quantity, and was so till the sixth month, yet, notwithstanding, she was always brought to bed at her full time†. Dr. Dewees, who very successfully combats Dr. Denman's arguments against such being the case, says, in support of his opinion, "We are acquainted with a number of women who habitually menstruate during pregnancy until a certain period, but when that time arrives it ceases. Several of these menstruated until the second or third months, others longer, and two until the 7th month; the two last were mother and daughter. We are certain there was no mistake in all the cases to which we now make reference. Firstly, they (the menses) were regular in their returns, not suffering the slightest derangement from the impregnated condition of the uterus; secondly, that they employed from two to five days for their completion; thirdly, that the evacuation differed in no respect from the discharge in ordinary, except they did not think it so abundant; fourthly, there were no coagula in any one of these discharges, consequently, it could not be common blood, or the blood of hæmorrhage; fifthly, in the two protracted cases the quantity discharged regularly diminished after the fourth month, a circumstance, perhaps, not difficult of explanation." I am the more induced to enumerate the above authorities to you in support of this important fact, because it has been lately called in question, and even denied, although certainly not on any very satisfactory grounds. Dr. Dewees has also described one of those very rare cases where the menses never appeared *except during pregnancy*. "In one extraordinary case," says he, "which fell under our notice, the contrary of suppression took place from pregnancy. A woman applied for advice for a long-standing suppression of the menses; indeed, she never had menstruated but twice; she had been married a number of months, and complained of a good deal of derangement of stomach, &c. We prescribed some rhubarb and steel pills. About six months after that she called to say that the medicine had brought down her courses, but that she was more unwell than before; the sickness and vomiting had increased, besides swelling very much in her belly. We saw this pretty much distended, and immediately examined it, as we suspected dropsy; but, from the feel of the abdomen, the want of fluctuation, and solidity of the tumour, we began to think it might be pregnancy, and told the woman our opinion. On mentioning our impression she submitted to examination per vaginam; this proved her to be six months advanced in pregnancy. After this she had the regular returns of the catamenial period until the full time had expired. During suckling she was free from the discharge; she was a nurse for more than twelve months; she weaned her child, and shortly after was again surprised by an eruption of the menses, which, as on the former occasion, proved to be a sign of pregnancy." Deventer, in his 15th chapter on the Diagnosis of Pregnancy by Examination per vaginam, gives a similar case, to which Dr. Dewees also refers. Perfect, in his second volume of Cases in Midwifery, relates another; and Baudelocque says, "I have met

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* Carus, Gynakologie.

† See also Burton, § 137. Perfect's Cases, vol. ii. p. 313. &c.

with several women who assured me that they had not had their menses periodically *except* during their pregnancies. Their testimony appeared to me to deserve the more credit, because they only applied for an explanation of this extraordinary phenomenon."

Nor is it necessary that menstruation should have taken place for a woman to be capable of impregnation. La Motte gives the case of a girl who was delivered before she had attained her thirteenth year, and who had never menstruated; and a still more striking case of an officer's wife, between eighteen and nineteen years of age, enjoying perfect health, although her menses as yet had not appeared. Mauriceau, in his first chapter, mentions this circumstance as a fact which he had repeatedly observed, and refers to some cases. Levret, in his "Art des Accouchemens," confirms it. "A woman," says he, "may conceive although she has not yet menstruated, provided menstruation would otherwise have shortly made its appearance;" and in another place he says, —"Women frequently become pregnant, although their menses have not appeared since their last accouchement, and without any inconvenience." Hence, gentlemen, you see how difficult it is to form a *decided* opinion as to the existence of pregnancy, a difficulty which is greatly increased wherever the patient has an interest in concealing her state from you. When the various changes, which I have before enumerated, take place in the abdomen in their proper order, one may conclude, with tolerable accuracy, that she is pregnant, but still not with certainty, for hydrops and polypus uteri, &c., may produce the same effects. Certain changes in the breasts are observed to take place some little time after conception, and which are looked upon as signs of pregnancy, such as swelling and stiffness in the nipples, which are unusually prominent; the areola round them is dark, and the veins are large and turgid, a watery fluid can be pressed from them, &c. All these are, doubtless, important signs, but still it will be scarcely safe to decide from them alone. Dr. Smellie and Dr. W. Hunter regarded the formation of what is called the *areola* upon the breast as proof positive of pregnancy; and the latter eminent physician is said to have placed such confidence in it, that he on one occasion pronounced a female subject in the dissecting-room pregnant upon this single sign, although the hymen was perfect, and his opinion upon dissection proved correct. It is of great importance, gentlemen, that you should be familiar with these various appearances; and I can assure you that on more than one occasion, when the diagnosis as to the existence or not of pregnancy has been rendered unusually perplexing from the complicated nature of the case, the appearance of the breast has enabled me to come to a correct decision.

The essential characters of the true areola have been very well described by Rœderer, in his "Elementa Artis Obstetriciæ." "The veins of the breast become conspicuous from their blue colour, the nipple becomes thick and appears inflated, its colour becomes more dull, the surrounding disc is of a similar colour, and is covered with small eminences like papillæ." Œdematous swellings of the inferior extremities and parts of generation, tremblings and heaviness of the feet, a varicose state of the veins of the leg, &c., have also been enumerated.

Sensation of the motion of the child *to the mother* is not a certain sign of pregnancy, for colic and flatus in the bowels will produce exactly similar sensations; but when the motion is evident to the experienced hand of an accoucheur, then it is quite certain. Peter Franck, however, relates a case where a soldier's wife was supposed pregnant, and he felt the motion of the child; the mother died, and he found ascites with hydatids.

Dr. W. Hunter, in speaking of the uncertainty of the signs of pregnancy, says, "I find I cannot determine at four months, I am afraid of myself at five months, but when six or seven months are over I urge an examination." To ascertain pregnancy, Rœderer used to examine the abdomen externally in the third month in the following manner:—Before taking any food he had the patient evacuate the bowels and bladder, and then lie on her back, with the head raised and the heels brought up to the nates, to relax the abdominal parietes; he then made her breathe deeply, and, placing his hand upon the abdomen between the pubes and umbilicus, was able to feel the firm ball of the uterus distinctly during the expiration.

Of late years the stethoscope has been recommended as a means of determining the existence of pregnancy, and is unquestionably a very valuable addition to our diagnostic researches upon this subject. In 1819, a surgeon of Geneva, named Major, noticed the interesting fact of being able to hear the pulsations of the fœtal heart through the parietes of the mother's abdomen and uterus; but the circumstance excited little attention until 1821, when an admirable memoir was presented to the Academie Royale de Médecine of Paris on auscultation as applied to pregnancy by Lejumeau de Kergaradec. In this essay he not only described the pulsations of the fœtal heart, but also a peculiar whizzing sound, synchronous with the mother's pulse; and, supposing this to result from the circulation in the placenta, he termed it *souffle placentaire.*

Upon applying the stethoscope to the abdomen of a pregnant woman during the latter months of gestation, the ear detects two species of pulsation, which are not only perfectly distinct from each other in point of character, but are also heard in separate portions of the abdomen. One of them consists of very distinct double pulsations, which follow each other rapidly, producing a species of ticking sound, generally heard about the middle of the

gravid uterus, rather more to one side than the other, and, generally speaking, to the left side. The other is a simple pulsation following a much slower rhythm, and accompanied with a deep whizzing, and, according to my own experience, sometimes twanging sound, which may be heard in several parts of the uterus, but chiefly and most distinctly in the neighbourhood of the fundus. The former of these sounds is produced by the pulsations of the fœtal heart, the latter by the blood of the mother circulating in the spongy vascular structure of the gravid womb. This latter sound was supposed by De Kergaradec to be produced by the vascularity of the uterus in the immediate vicinity of the placenta, but has since been proved by Dubois, Kennedy, and others, to result from the general increased activity of the circulation throughout the gravid uterus.

With regard to the *fœtal pulsations*, we find them beating at the rate of from 130 to 150 double strokes in a minute, nor does the age of the fœtus appear to have any effect upon them in this respect, for even in the earlier periods of pregnancy, viz. about the eighteenth or twentieth weeks, when they can be scarcely distinguished, and even that with considerable difficulty, the rate of the pulsation is precisely the same as what I have just mentioned. Sometimes, however, for a few minutes, without any assignable reason, and without any increase in the rapidity of the mother's pulse, the fœtal pulsations become extremely quick, and so weak as to be scarcely perceptible. In examining the pulsations of the fœtal heart, we find that the space over which they can be heard is not so very small as one might imagine, being not less than four fingers' breadth, and sometimes even more. The less the uterus is distended with liquor amnii, the smaller is the extent over which the pulsation of the fœtal heart may be traced, and where the membranes have ruptured, it diminishes still more, although it increases in strength and clearness. These double pulsations can only be heard at one point of the uterus, provided there be but one child; but Dubois has shown from a series of interesting observations, that in cases where there are twins, a second pulsation may be distinctly heard at about an equal distance from the first, although not until the membranes have ruptured and labour has commenced, until which period this second pulsation is so indistinct, that it cannot be decided upon with any certainty.

The other pulsations synchronous with those of the mother's heart, may generally be detected in several parts of the anterior surface of the uterus. This sound is heard with most distinctness where the blood vessels have undergone the greatest increase of size, and where they are most contorted, for instance, in the neighbourhood of the placenta. I cannot say with any certainty on which side these pulsations are heard with most distinctness, but this I know, that it is far from being always at the side on which the placenta is situated. This circumstance, and the fact that we can sometimes distinctly hear what has been called the placental sound at two opposite points of the uterus, especially in multiparæ, together with numerous instances where this sound has been heard, where it has been shown by the prolapsed funis that the child was dead, and even where it has been heard shortly after labour, prove beyond contradiction that this "*souffle placentaire*" of the French authors has nothing to do with the placenta itself. I have occasionally heard this sound confined to each hypogastrium, and, from its remarkable distinctness, have been led to suspect the presence of two placentæ, when the event of the labour has not only shown that the uterus contained but one child, but that the placenta was situated in the fundus. I have every reason to suppose that what I heard was produced by the iliac arteries, and I find that this opinion has also been entertained by Haus of Würzburg, in an essay on this subject in 1823, and by others. If this be the case, why may we not be equally misled by aneurism of the aorta, of the cœliac artery, and other large abdominal vessels? Much confidence cannot, therefore, be placed in the sound when taken by itself, although when present with the other signs of pregnancy above mentioned, it will assist in confirming our diagnosis. The sound of the fœtal heart, when once heard, is perfectly diagnostic, and not only satisfies us as to the presence of pregnancy, but also as to the child's life; still its absence is very far from proving the contrary, especially when any of the other signs of pregnancy are present. The auscultation of the gravid womb, gentlemen, is by no means easy at first, and requires some practice and experience before you can decide with certainty upon the nature of the sounds you hear.

At the seventh month the head can be felt upon examination, and then, of course, there can be no doubt whatever. We have, in short, only three certain signs of pregnancy, viz. the being able to feel the head per vaginam, the motion of the child through the abdominal parietes, and to hear the pulsations of the fœtal heart. Thus you see of what importance it is for the accoucheur to be able to examine per auditum as well as per tactum, with such a degree of certainty and facility, that he will be as little inclined to doubt the accuracy of these senses as that of his own eyes. "No department of the healing art," says a distinguished reviewer, "requires more skill, more caution, more of gentlemanly character, more of sound information on all subjects, than the properly educated accoucheur of the present day. Cases of the most perplexing difficulty, involving character, fortune, nay, even life itself, and of the most frightful danger and responsibility, are frequently entrusted to his charge; *his* opinion will and *ought* to be the opinion and wish of all others, and his conduct may either save or destroy.

Let him not therefore neglect any means of adding to his knowledge, and supplying himself with useful and available information, among such means none promises more important results than the use of the stethoscope. When all the ordinary symptoms of pregnancy are absent, or so muffled and obscured as to afford scope only for conjecture, if the fœtal pulse can be heard but once unequivocally, the nature of the case is obviously beyond cavil; the auscultator need not heed the discordant opinions of others, for what more can he desire than to have held converse, as it were, with the very being whose existence is disputed *."

I cannot illustrate better to what extent the consequences of ignorance on these important points may lead, than by relating to you a case, which the celebrated Baudelocque communicated to my friend Professor Naegele of Heidelberg. A young French countess was imprisoned in the Temple during the revolution for being suspected of carrying on a treasonable correspondence with her husband, an emigrant. She was condemned, but declared herself pregnant; two of the best midwives in Paris were ordered to examine her, and they declared that she was *not* pregnant. She was accordingly guillotined, and her body taken to the school of anatomy, where it was opened by Baudelocque, who found twins in the fifth month of pregnancy." A similar case occurred at Norwich a year or two ago. A woman was condemned, but she stated herself to be with child: a jury of matrons was empannelled, who after due examination decided that she was not so; upon being sentenced she fainted, when the surgeon of the prison, who was standing by, and caught her in his arms, declared that he distinctly felt the motion of the child; other medical men were called in, who decided that she was pregnant, and judgment was delayed accordingly.

We occasionally observe certain conditions of the female system which put on a most striking resemblance to pregnancy, both functionally as well as organically, without at all depending upon the actual presence of pregnancy. The abdomen begins to swell from the pubic region exactly in the same gradual manner as in pregnancy; the breasts become painful, swell, and secrete a lymphatic fluid, frequently resembling milk; the digestive organs become disordered, irregular appetite, nausea and inclination to vomit, constipation, muscular debility, change in the colour of the skin, and frequently of the whole condition of the body ensue; the nervous system suffers, and even the mind itself frequently sympathises, the patient is sensible of movements in the abdomen like those of a living fœtus, then bearing down pains running from the loins to the region of the pubes, at last actual labour pains come on, as with a woman in labour, and if by chance it has so happened that her former labours have been attended by any peculiar symptoms, these, as if it were to complete the illusion, appear likewise *. Perhaps one of the most extraordinary cases of self-deception as to the existence of pregnancy which has been ever observed, is one recorded by Klein, the celebrated surgeon of Stuttgart. "Madame de B——, æt. 43, of an extremely hysterical habit, and mother of thirteen children, felt herself to be again pregnant after a lapse of five years; the catamenia, which had been always very regular, were suppressed, and so early as in her second month she reckoned that the 15th of May would be the day of her confinement. In this respect this lady presents a remarkable peculiarity, having been able in every pregnancy to fix the day on which labour would come on so accurately, as to tell me, even at an early period, 'you may make what engagements you please on the seventh and ninth of such a month, but you must be here on the eighth, for I shall be confined on that day,' nor was she ever mistaken in her calculations. In all her pregnancies she used to be attacked with dyspnœa threatening suffocation, which could only be relieved by active bleeding, the blood showing every time a thick firm buffy coat. At first I found it necessary to bleed her almost every month, at *least* once in six weeks, but in each pregnancy, as the time advanced, she required it once a fortnight, and at last every week. It was precisely the same with her this time, the blood presenting the same appearances; she experienced the same disgust for certain articles of food as in former pregnancies, and unusual longings for others; she quickened *exactly* at the time she reckoned; the abdomen increased in size, the only circumstance which made her feel uneasy, was that the catamenia appeared now and then, but she was not alarmed at it, being aware of the possibility of its occurrence during pregnancy; towards the end of her reckoning her state was very uncomfortable; as the time of her confinement approached she became scarcely able to sit, on account of a bearing down to a troublesome degree, she could only sit upon the edge of a sofa with her legs far asunder, and could only lie in bed upon her back; pains made their appearance upon the morning of the 15th of May, precisely as she had reckoned; as they gradually increased I was sent for; I went immediately, being aware that in every labour she was attacked with violent convulsions, and, after the child was born, fell into a state of asphyxia, which once lasted even twelve hours, during which there was no trace of warmth, pulse, respiration, or motion whatever, to such a degree, that the first time this occurred she was pronounced to be dead, and letters were written

* Med. Chir. Review, Jan. 1834.

* W. J. Schmitt Zweifelhafte Schwangerschaftsfälle.

to apprise her friends of the event. On arriving I found her with very severe pains, and in most vehement convulsions, being accompanied with violent chattering of the teeth; as this state had continued for some time, and as I knew that her labours were quick, I examined immediately; at this moment she had a severe pain with violent convulsions, and an extremely rapid pulse; the abdomen was strongly distended, a portion of the vagina was protruded, so that every moment threatened expulsion of the child, and the urine was expelled involuntarily. On examination per vaginam, which I continued after the pain was over, I found to my astonishment that she was not pregnant, and therefore still less likely that she would be delivered. I could find no trace of a child whatever, even external to the uterus, and yet she was suffering powerful labour pains, accompanied with violent convulsions. I was well aware what a surprise my statement would create; I knew my patient, and I could easily account for her singular state. On account of its extraordinary nature I called in another accoucheur, who was not informed of the peculiarity of the case; he found her in the same pains, convulsions, and chattering of the teeth, which had continued without intermission. I told him in the patient's presence, as we had previously agreed upon, nothing beyond that I could not satisfactorily ascertain the nature of the presentation. He examined carefully, both externally and internally, during as well as after the pains, and came to precisely the same conclusion as I had done. As it was now evident to the lady, that both practitioners had come to the same conclusion in perfect ignorance of each other's opinion about it, and that the second one could not have been misled by the first, the pains and convulsions suddenly ceased, and, after this scene had lasted three hours, she found herself as well as nine months before; she saw the deception which she had practised upon herself; her sensations of pregnancy, her dyspnœa, her dislikes and longings, and other annoyances ceased, she could sit and lie as she liked, and all that remained for me to do was to endeavour to remove the mental depression which succeeded to so extraordinary a mistake *."

It is almost impossible to decide whether twins be present or not merely from the size of the abdomen, because we constantly see women pregnant, whose abdomen is immensely distended, and yet there is but one child, and a profuse quantity of liquor amnii; whereas, on the other hand, it not unfreqeuntly happens that those who have twins have not been at all remarkable for their size during pregnancy, nor had they any reason whatever to suspect the presence of twins. Some affirm that the motion of the child is always felt on both sides, and that the abdomen is broader, but we can place very little reliance upon these appearances. Professor Naegele remarks, that he has frequently observed the inferior segment of the uterus to be unusually high up and empty, but confesses that it is a very uncertain sign.

* See also a very interesting case of supposed pregnancy in my Reports of the General Lying-In Hospital, *Medical Gazette*, 14th June, 1834.

CLINICAL LECTURES ON SURGERY,

DELIVERED AT

THE HOTEL DIEU, PARIS,

BY BARON DUPUYTREN,

PRINCIPAL SURGEON OF THAT HOSPITAL.

Corrected by himself.

(Continued from page 755.)

Strangulation — Treatment of — Effects of Incisions on Compressed Parts—Pressure, Effects of—Union by First Intention—General Remarks on Treatment of Wounds of the Chest—Of Wounds of the Abdomen —Use of Enlarging the Opening in Retained Balls — Dressing of Gun-Shot Wounds, &c.

GENTLEMEN,—What I have said of the circumstances which favour strangulation, and of its effects, leads us to a knowledge of the preservative and curative indications in such an occurrence. We must endeavour to prevent it by opposing the development of inflammation, which is its primary cause, by local and general bleedings, by cupping, employing emollient cataplasms, purgatives, revulsives, &c., and this treatment, even when it fails to prevent the inflammation, will tend to moderate its intensity.

But of all the methods calculated to arrest the strangulation, the most efficacious, without a doubt, is liberating the parts by an incision of the constricting tissues. The flow of blood which follows such incisions, contributes much in diminishing the congestion of the parts; and, so far from arresting, we must encourage it, till such a quantity has been lost, as a subject under inflammation can bear without danger.

No one disputes the utility and even the indispensable necessity of dividing the parts, when the strangulation already exists and is intense; but some practitioners have thought that it ought not to be employed as a preventive means, and that, in practising it indiscriminately in all cases, we may cause evils to the patient which should be avoided. Doubtless the division of parts should not be effected without discrimination, but there are cases in which it is imperiously indicated, as much from the nature of the weapon which has inflicted the wound, as from the parts which have been injured. Thus in wounds with a narrow opening, with a prolonged tract, which involve the cellular and aponeurotic structures in their course, should such wounds have been made by gun-shot, or cutting or stabbing weapons, the ope-

ration cannot be dispensed with. Experience proves, in effect, that, by deferring the disengagement of the parts by incision as a preventive means, we commonly risk the occurrence of strangulation, and almost always in this case the preventive method recommended against the chance of the evil would have been in itself a great curative means. Thus have I seen, at the House of Recovery at St. Cloud, the cure of wounds caused by fire-arms prolonged almost indefinitely, when they had only been treated with leeches and emollients, without a free division of the surrounding parts.

It is not only in wounds by stabbing instruments and fire-arms that strangulation exists, and the necessity of incision; strangulation exists in all inflammation, as well external as internal, which is developed beneath the aponeurotic layers, and amid the fibrous tissue. It is often developed in the thickness of the skin and beneath it, principally among grooms and others who attend upon horses; of this class are particularly the furuncle and non-contagious carbuncle, and because a conjunction of the causes capable of producing them is found, especially in armies, it is important that military surgeons should be aware of the character and nature of this sort of affections.

Incision has for its object to free the inflamed parts from compression, and as a consequence to destroy the tension of the surrounding parts. Hence it is especially directed against the aponeurotic, fibrous, and other tissues which oppose the free extension of inflamed parts.

This operation needs no other instruments than the bistoury and director, but, in many cases, the finger supplies advantageously the latter. It scarcely ever happens that the ordinary bistoury is insufficient; if it be too short, we must get one longer, for such cases as extend deeply. Whatever may be its length it ought to be blunt pointed, in order to avoid any lesion which might happen to the deep-seated parts; the blunt point should be placed nearer the back than the edge of the instrument, so that it may not interrupt the cut. The director must be proportioned to the depth intended to be attained; whenever the finger can supply its place it is a surer guide. If it is intended to perform the incision upon parts which are entire, or have suffered no solution of continuity, we must cut them from without inwards. We must be content, according to the case, to make one or many incisions; a single one will suffice when the strangulation is confined within a moderate extent; but two, three, and even a greater number may be required where the strangulation is of greater extent, like that which is seen in diffuse inflammation under the aponeurosis of the limbs. There are occasions in which we are obliged to multiply our incisions and enlarge them, or see gangrene attack the parts implicated. Crucial incisions are necessary in certain cases of inflammation complicated with circumscribed strangulation, as anthorax and furuncle.

To incisions, simple or multiple, linear or crucial, ought to succeed pressure to squeeze out the serous purulent, or other liquids, infiltrated, or united in little wells, for the presence of these liquids may, as well as the inflammation, become the cause of a new strangulation. Many believe that they have bought the ease, which supervenes to this pressure, too dearly, by the acute pain its application causes at the moment. It is, nevertheless, the only mode to obtain a speedy cure.

In the case of a pre-existing wound, the enlargement ought to be made from within outwards. To do this the ordinary bistoury is conveyed over the director, or the finger, or you may use a blunt pointed bistoury. When the enlargements are made at the surface of the parts, the direction in which they are made, their form, linear or crucial, in general is of little importance, but it is not the same when we operate to a great depth, then they ought to be made in the direction of the vessels, nerves, muscles, tendons, &c., and, if possible, at some distance from them, under pain of causing hæmorrhages, paralysis, and other evils, of which we have heard so much. Thus I have seen, at St. Cloud, an invalid, who, having had the tendon of the pectoralis major of the left side divided near its insertion into the humerus, by an incision for extracting a ball, which was never found, was entirely deprived, as a consequence of this operation, of its use.

To be efficacious, the enlargement ought to be practised in the whole length of the wounds which require them, and in the whole extent of surface which the strangulation occupies. If they do not penetrate through the whole depth and length of the disease, an incomplete relief will be the result. But proper as it is to conform to this principle, it as much behoves us to avoid the temerity of those who, for the slightest wound or insignificant strangulation, perpetrate an incision extending the whole length of the limb, and who, by such practice, make the patient suffer useless pain, dangerous hæmorrhages, endless suppurations, and finally obtain a cure at the price of immense scars and other inconveniences.

If the widening of the wound has been practised, in order to destroy the strangulation, the blood should be allowed to flow so long as the invalid may be able to bear it with impunity. If it has been done for the purpose of extracting foreign bodies we must proceed immediately on our search with the aid of means, which we shall presently notice.

The union by the first intention, of parts divided for the purpose of enlargement, is a piece of folly, which I have witnessed; there is, in fact, a contradiction between performing an incision to relieve strangulation and the immediate union of the parts which replaces the evil.

Indeed, I have seen, in a case of sub-aponeurotic inflammation of the anterior inferior part of the fore-arm, the immediate union of the incisions, made for relieving the tension, reproduce the mischief intended to be relieved.

In another case of phlegmon of the leg, the same union having taken place by the first intention, I have seen a considerable purulent collection formed in the thickness of the limb. It is, therefore, necessary to leave to themselves the parts thus divided, or else to content ourselves with inserting a pledget of lint, covered with ointment, between the lips of the wound, and to use only the simplest dressings, which shall permit the matter to escape if it happen to be formed, and to attempt at a future period the union if practicable.

What I have just said about incisions is especially applicable to hurts of the limbs. But is the operation practicable in other regions of the body. The cranium being covered with a fibrous tissue, very much condensed, the wounds which affect it are of the number of those which demand imperiously either incisions and preventive dilatations, or enlargement where the strangulation is manifest; and I remark here, that it may not be forgotten,—first, that in whatever part dilatation is practised, it ought to be at the point where the foreign body has made its entrance. The reason is, that almost always foreign bodies, formed or introduced by the projectile, are situated near to this opening, and it is there consequently that the largest incisions become necessary to facilitate their issue. Secondly, another general rule, which should be adopted, is to widen more largely the opening which, in regard to the position of the wounded, is the most dependent, with the intention of giving an easy issue both to foreign bodies and pus.

In wounds of the chest, by sword, pike, or bayonet, far from enlarging them, they ought to be directly closed, at least if there be no lesion of the intercostal artery. But when the wound is produced by gun-shot we must follow a very different plan. Thus, in effect, the openings and the trajet of the wound are covered with mortified parts, inflammation will develope itself there, and will be followed by sloughing and suppuration, sometimes by the exit of foreign bodies, nature opposes every effort at union, and this union would be at least useless even when not dangerous.

In the belly, enlarging the wound is counter-indicated, for in extending the opening the viscera may escape from that cavity, it would destroy the salutary adhesions which the hurt has produced, and which often opposes the falling out of the intestines. In the pelvis it is nearly impossible; we cannot operate thus on the bones, and all that we can do is to enlarge the opening made in the soft parts in some cases where it is believed a foreign body may be lodged. You are doubtless aware that one of the causes of the severity of wounds of this region, is the difficulty with which we are able to get the pus which is formed in the cavity discharged. With regard to the joints, it is very rare that they are hurt without the bones being injured. If they enclose a foreign body, we must enlarge the wound, search for, and extract it; if they are only bruised, and not opened, beware of opening them. But I have said that the bones are almost always implicated, and, in that case, we must enlarge and extract the splinters, provided we expect to perform a cure without amputation. Thus, to continue, by incisions, dilatations, and widening the wounds, it is proposed to fulfil three principal indications, to prevent the obstacle which the fibrous inextensible tissues oppose to the inflammatory development of the soft parts, this is the *preventive enlargement;* or to destroy this obstacle when it already exists, this is the curative enlargement; to procure an easy issue for the suppurative matter, and to facilitate the search for foreign bodies. Under the last head the widening is especially adapted to wounds whose opening and trajet are too narrow to permit the introduction of the finger, or of explorative instruments; to those whose course is too irregular for us to arrive at the body to be extracted directly, and, finally, to those which are complicated with fractures of the bones, to facilitate the extraction of splinters.

The bodies which may be found in wounds are of two sorts; the first, which we improperly call primitive foreign bodies, is the projectile itself. All matters which have been introduced with the projectile are arranged under the second head.

In order to proceed in search of, and to extract, foreign bodies in general, we place the patient, as well as we are able, in the position in which he was at the time of receiving the wound, as Paré has already wisely counselled. The best instrument to employ is the finger, because the immediate touch is preferable to the sensation conveyed by an instrument, but if the finger cannot penetrate so far as the situation of the body, we should avail ourselves of a female sound, in preference to a director or stilet. If it can be touched by the finger, the common forceps will ordinarily suffice to extract it, but, however, the ball forceps is preferable, because this instrument embraces and withdraws it with less risk and pain. If it has penetrated to a great depth, if the trajet be crooked, if, finally, it be impossible to extract the body in a natural direction, we are often obliged to practise counter-openings; yet we ought not to forget that if it cannot be brought away without great difficulty and pain, it would be better to abandon the attempt, or postpone it to a more favourable occasion. When the sloughs are detached and suppuration established, it becomes often more apparent, more moveable, and consequently more easily withdrawn.

The projectile being taken away, every other foreign body in the wound should be got out at the same time; but often, in spite of every care, there will remain portions of bone

and mortified tendon, of clothes, wadding, &c. These are not expelled until many months afterwards by the efforts of nature, and it is not till then that union takes place.

Let us examine now the indications which projectiles which have entered the bones offer. If the ball has remained in the spongy texture it is known by the absence of a counter-opening, by the opening which exists leading to the bone, and by the sound which is imparted to the probe as well as the resistance opposed to it. The sound produced on touching a leaden ball is of a stifled and deadened character, the sound against a compact bone is clear. Against the spongy texture there exists little resonance, a resistance is experienced quite different from that given by a compact bone or a ball.

The ball once found, if it is enveloped in a portion of garment, it may be drawn out by means of it; these cases, however, are very rare. If we cannot do this, we must employ the screw elevator (tirefond), for thus the ball is immoveable, and the screw easily penetrates it; the extraction is completed by turning the instrument round. But what ought we to do if these means fail? We must divide the integuments with a crucial incision, raise, and dissect off the ragged flesh, and apply a trephine to the bone, so as to enlarge the bed of the ball, then we may extract it without difficulty. The same method must be adopted when the ball is bedded in a flat bone, in a bone of the cranium for example, between the external and internal tables.

If the ball has traversed the bone and escaped, there is no particular treatment to be followed. The canal in the bone need not be enlarged, because the bony structure does not possess the same power of swelling as the soft parts, nor, consequently, to cause strangulation. The case is, however, different where the bone is much splintered.

I now pass on to the indications:—The first consists in the dilatation of the openings of entrance and exit. If there be no aperture of escape, the ball rests either in the bone or in the soft parts. It therefore may be necessary to extract not only the ball but also the bony fragments; but if, when the dilatation is completed, the search presents too many difficulties, and occasions too much pain, if the patient be very irritable, we must abandon all attempts, for fear of inducing spasms, convulsions, or tetanus.

Once the wound enlarged, we must search for the bony fragments with the finger, and try their mobility. If they are loose let them be extracted with the forceps; if they be loose as far as the bone is concerned, but attached to tendons or other tissues, they ought nevertheless to be taken hold of, and separated, if possible, by the knife or otherwise from their connexions, and withdrawn. But here a question arises,—Should they be extracted if situated at a depth too great for cutting instruments to be safely used?—I have done it sometimes, but I found the inconveniences of the practice more than counterbalance the advantages.

The tertiary splinters not being yet formed at the time of the accident, their extraction cannot be attempted; these are the true necroses, which become moveable in forty or fifty days, and cannot be extracted before that time; but then they are often found imbedded in callus, especially if the fragments be too voluminous to be expelled by the suppuration. We have seen, in the course of our lectures, what happens when there is a sequestrum and a provisionary callus, but if the latter cannot be formed because of the frequent movements of the wounded, or of a lesion too deep of the soft parts, or of the vessels, the interminable continuation of the malady drives both patient and surgeon to despair.

The dressing of gun-shot wounds embraces many cares and details which are important to be known. They ought to be covered and kept from the contact of the atmosphere as soon as circumstances permit. For this purpose fine linen should be used, covered with cerate, which should be placed over the wound; above this a quantity of lint of less or greater thickness, according to the moisture likely to exude, should be placed.

Much importance is attached by the world to the removal of the first dressing, which was done formerly at the expiration of twenty-four hours. At this time the wound was dry, the blood rested at the surface and adhered strongly, the lint which covered it was stuck to it, and the most acute pains resulted from the attempt to tear away all the pieces of the dressing. Thence the fear spread among the public. However, we do not now uncover a wound until it can be done without pain to the patient. Five, six, eight days are necessary for this purpose; the wounded parts then begin to afford suppuration, the lint is imbued with it, and comes off without effort.

We must multiply the dressings, making one at least in the twenty-four hours, sometimes two or more when the suppuration is very abundant; the dressing having also for its object the keeping the fragments in place, the affording exit to the pus, and bringing the walls of the wound into juxta-position.

Care should be taken at each dressing to well cleanse the wound by means of injections, whose quality shall vary according to the period of the malady, such as the chlorures, &c., with the dressings should be sprinkled.

The position of the member and of the patient merits special attention. The horizontal position is an obstacle to the evacuation of the urine, and a cause of retention. This retention is formed by degrees: first, a small quantity of urine is not evacuated, next a greater, and at last the urine flows drop by drop continually. We may then know with certainty that retention exists, although there may appear a contradiction between retention and a continual dribbling. This occurs be-

cause the over-distended bladder expels only as much as renders it over-full. It is necessary, therefore, frequently to sound your patient, or leave in the bladder an elastic sound. The remaining in bed, if it is necessary, when there is a fracture, has not fewer inconveniences. The same position, kept for sixty or eighty days, determines pains to the heel and leg; redness, with excoriation; sloughs on the sacrum, on the spinal apophyses, on the spine of the scapula, on the great trochanter, &c. To combat them, we must cause the patients to change their beds from time to time. The wounded should be carried by intelligent and adroit assistants to another bed prepared beforehand.

If this changing of beds be impracticable, we must prevent sloughs by means of resolutive and tonic lotions, such as a mixture composed of water and sugar of lead or brandy, by placing pads of fine and soft lint sewn to the linen and spread with cerate. As to the frequency of the occurrence of sloughs, it cannot be denied that some individuals are more subject to them than others, and that certain idiosyncrasies predispose more peculiarly to their attack.

The learned lecturer now recapitulated some few of his observations on stupor, commotion, tetanus, &c., which he had treated so fully when speaking of these individually, thus terminating his valuable observations on gun-shot wounds.

Reviews.

The Medico-Chirurgical Review, Jan. 1835.
The Medical Quarterly Review, Jan. 1835.
The Dublin Journal of Medical and Chemical Sciences, Jan. 1835.

We have a duty to perform to our readers as well as to the Editors of the periodicals under notice, viz. alluding to the contents of their Journals. We cannot possibly desire to omit such a notice, for each work has its merits,—one is occasionally superior to its cotemporary, but, upon the whole, they are all conducted with much ability. *The Medico-Chirurgical* is a periodical of long standing, and we trust will have a perpetual existence, the elaborateness of its reviews, and their copiousness where the subjects merit such notices, have never been excelled. *The Medical Quarterly* deserves an equal praise in this department, some of the reviews are exceedingly lively and spirited. The writer glances at his author, throws a veil of poetry over him, and envelops him either in a dull shroud of melancholy, or emblazons him, according to his deserts, in electrical cornscations.

The Dublin Journal, one of more recent date, but though last in our list not least, excels the preceding in the originality of its contents, though not perhaps in its usefulness. For its magnitude it has not a superior. It is a valuable periodical. Our weekly contemporaries do their utmost, good souls, but it is (we, as modest men, blush to tell it) the opinion of a large portion of our professional brethren, that, for variety of subject, profundity of thought, extensive, and curious, and interesting information, we are not surpassed. We are satisfied. In referring to the works we have named, we shall cull for our readers some of the sweets they contain.

From each we shall extract something, and this something shall be interesting. In the *Medico-Chirurgical* we meet with the following curious case:—

Crepitatio Musculorum.

P. 168.—"In our last Number we mentioned a curious case of loss of power in one of the lower extremities, with a remarkable and loud cracking of the muscles, when the limb was put in motion. We mentioned that we had recommended the patient, Lady W——, to make a tour on the Continent, more with a view of diverting her ladyship's mind, and improving her general health, than with much hope of restoration of power to the nearly paralysed limb. She travelled through Holland, ascended the Rhine, visited the Brunnens, but did not bathe, made a tour through some parts of Germany, and also into Switzerland, returning by Belgium, and reaching London after an excursion of eleven weeks. We preceded the patient in the same track, but, having crossed the Alps into Italy, we did not happen to fall in with the party, or learn the result of the tour till recently. On calling at her ladyship's residence, we were not a little surprised and gratified to find her walking about the drawing-room without crutches and almost free from lameness. We learnt that the power of the limb gradually returned as she pursued her journey, and, indeed, had been nearly restored before she reached Brunnens, consequently she wisely travelled on, and recovered the use of her legs. We were now anxious to know whether the crepitatio musculorum remained, and we found that it had nearly disappeared, but was now as loud as ever. Since we published the account a medical friend called on us, and stated that he had the same crepitation in the muscles seated on the back of his neck. This we ascertained to be the case by applying the stethoscope. But the cracking is not near so loud in the case of the gentleman as in that of the lady. We have observed that this crepitatio musculorum is noticed by one of the Dublin lecturers (but his name has escaped us) as sometimes occurring in chronic rheumatism. The astonishing benefit, however, which has resulted from travelling exercise, and that in such an unpromising case as Lady W——'s, deserves record, as it may lead to other trials in similar circumstances."

As an appendix to this number we meet with an eloquent article on "the waters of Pfeffers," and when, in addition, we say that it is interesting, it will not be denied that it

must have been written by the senior editor. After some preliminary observations, in which scenery is graphically described, associations and feelings, physical as well as moral, are luminously depicted, we are brought imperceptibly, but at the proper period, to the medicinal efficacy of the baths of Pfeffers, baths which for many centuries have attracted the notice of travellers, and held for so long a period a high reputation; baths which have recovered the lame and the blind, given youth, shall we say, to the aged, cleansed the leper, and purified the most unclean. But we must stop, and proceed to the medical parts of the article, an article well worth the price of the whole work. Though we cannot subscribe entirely to all the doctrines of the author, and think him occasionally in error, we shall yet present a specimen for inspection.

"It is clear, however, that there are many complaints to which the Baths of Pfeffers might prove injurious. In pulmonary affections of all kinds, warm baths are more than doubtful, they are generally prejudicial. The afflux of blood to the surface, while in the bath, must be followed by more or less of afflux from the periphery to the centre of the body, and then the weak organ will experience more injury than benefit from the operation. Besides this, there is a certain degree of reaction that follows all baths, both hot and cold, and this reaction or excitement almost always aggravates the symptoms of chronic inflammation, as organic disease of internal structures. Chronic hepatitis may form an exception sometimes. The excitement of the *tepid* bath on the skin generally increases the secretion of bile, and in that way relieves a congested liver. But even here, the bath should never be made more than tepid.

"The same observations apply to all organic affections of the heart. The tide of the circulation, in such cases, should never be accelerated by either warm or cold bathing, or by the exercise of climbing heights, in such localities as the Pfeffers. I have seen in my wanderings on the continent many invalids incautiously sent to drink and bathe in various medicinal waters, and where injury would almost inevitably be the result.

"In determinations, as they are called, to the head, in chronic affections of the membranes, of the vessels, or of the substance of the brain, hot or cold baths are decidedly contra-indicated, and for reasons already adduced.

"As people with acute diseases are never sent to such places as these, it may seem unnecessary to allude to them here; but I cannot help taking this opportunity of cautioning against a practice by no means uncommon in this country, namely, the employment of warm and even hot baths in acute rheumatism. I can safely declare that I never yet saw any good effects from such procedure; but, on the contrary, that I have generally observed an augmentation of the fever, or, what is worse, an increased tendency to translation, not merely from joint to joint, but from the surface to some internal organ, especially the heart. I have been long in the habit, while investigating hypertrophy of the heart succeeding acute rheumatism, to inquire respecting the treatment of the original disease; and I have found that, in more than three-fourths of these cases, the hot bath had been employed to relieve the pains of the limbs. Acute rheumatism is a specific and not a common inflammation. It is not to be cured by general and local bleeding, like other topical phlegmasiæ. The blood, indeed, will be found highly inflamed; but that does not authorise venesection in this particular case, no more than the same phenomenon would in pregnancy. Acute rheumatism is a very manageable disease if baths and blood-letting are left alone, in general, and calomel and opium given, with colchicum and saline aperients. Warm evaporating lotions to the parts inflamed are infinitely better than leechings and baths.

"I doubt the utility of warm baths in acute inflammation of internal structures generally, and in many of them, where they are sometimes employed, I am confident they are detrimental. It is by no means uncommon to place a patient labouring under acute hepatitis in a warm bath after bleeding. It is hazardous to employ this measure *before* the inflammation is checked, and it is unnecessary *afterwards*. The same practice is often pursued, and always with risk, in pneumonia and carditis. Nothing would induce me to order the warm bath in either of these complaints. Inflammations of the peritoneum and of the urinary organs, including, of course, the kidneys, are those in which I have observed most benefit and least danger from the warm bath. But even in these, very copious bleeding should precede it, the bowels being well cleared, and the secretions rendered as healthy as possible. There are very few other internal inflammations where I would venture on the warm bath."

The *Dublin Journal* opens with a good practical article, by Dr. Ingleby, on "Illustrations in Midwifery, embracing chiefly the obscure Characters of Pregnancy, and the Signs which are supposed to denote the extinction of Life in the Ovum." Various anomalous affections are noticed, such as vomiting, sanguineous discharges, the condition of the mammæ, with a multitude of others. The following is a fair specimen of the powers of observation of the author:—

"*Fœtor of the Discharges.*—As indicating the extinction of fœtal life, a fœtid state of the discharges from the vagina is regarded as a prominent sign. Blood, when confined only for a short time within the uterus, and exposed to atmospheric influence, soon becomes fœtid. But, besides this, a very high degree of fœtor may be imparted to the natural mucous secretion which lubricates the vagina. This

peculiarity is compatible not only with a healthy constitution and a living child, but also with a natural state of the placenta and membranes, and therefore not very explicable. On ascertaining this secretion to be extremely fœtid, during an attendance upon a labour, and the movements of an infant very evident, thinking there might be a plurality of children, and vitality extinct in one of them, I suggested to the husband of my patient the probability of such an event; my conjecture was ill-founded, for the uterus contained a single child, and nothing unusual was detected either in the secundines or liquor amnii. A very fœtid state of the liquor amnii is quite compatible with vitality in the ovum.

"*Irregularity in the Form of the Abdomen.*—We occasionally meet with a singular deviation from that uniformity in the shape of the uterine tumour which characterises pregnancy,—I allude to a partial and circumscribed elevation of the uterine tumour, continuous with the general development, and neither affected by the position of the body, nor materially changed by pressure. It is not unlike a fibrous tumour developed under the uterine peritoneum in advance of the surrounding parts, and has not, I think, been distinctly described by authors. This deception appears to have influenced the medical officers of a public institution in the case of a woman far advanced in pregnancy, and in whom the uterus chiefly occupied one side, and resembled two large steatomatous tumours. Although I am not prepared to say that the appearance may not sometimes consist in an irregular development of the uterus, I incline to the opinion that it is occasioned by a faulty state of the abdominal parietes, resembling, in this respect, a partial vesico-vaginal hernia. It is, perhaps, occasioned by a separation of the recti muscles. In persons at least who have borne many children, the irregularity in the contraction of the muscles not unfrequently occasions a very pointed deformity of the abdominal coverings. In one such instance, after the birth of an unusually large child, I could easily have passed my hand through the aperture.

"*State of the Funis.*—If the funis has really ceased to pulsate, animation must be either suspended, or, what is more probable, life absolutely extinct. The want of pulsation in the cord may be absolute or only apparent: it may be rendered merely feeble by the partial pressure of the child's head or the general contractions of the uterus. I recollect an instance of funis presentation, in which no pulsation whatever could be felt in the morning, and artificial delivery was in consequence abandoned, and yet, in the evening, the cord pulsated most distinctly, but the uterine action was then too great to allow version to be undertaken. When the cord is bulky and deformed by gelatinous deposition, and the amount of prolapsion is very slight, a feeble pulsation is not readily distinguished. It is of the last importance that the examination be made with the utmost accuracy, since our practice will be materially regulated by the result."

This is but one of the instructive articles in our sister contemporary. Mr. Kane on the Æthers, Dr. Griffin on Medical Problems, Dr. Churchill on Uterine Inflammation, Practical Observations on Midwifery by Dr. Montgomery, constitute interesting and important texts for our next number; we cannot pass them unnoticed.

Cerebral Affections of Children. By U. U. Gerhard, M.D., of Philadelphia. (Extracted from the American Journal of the Medical Sciences.—Art. III. and IX.)

Though the progress of medical science multiplies the number of diseases, it yet lessens their complexity. The accurate knowledge we possess of the anatomical structure of organs—that each is composed of a variety of tissues varying from each other in their physical and vital properties—each displaying its own characteristic phenomena in disease, and presenting its particular morbid appearances after death, has enabled us to simplify disease, and to locate it more accurately.

Cerebral affections, however, are some of the enigmas of medicine,—but increased in a tenfold degree when occurring in infancy. They frequently baffle all the acuteness and closeness of observation, and all the intensity of reasoning. Is the brain the receptacle of the mind?—So it is believed. If the brain become altered in structure, or its circulation disturbed, we thence naturally expect an aberration in the mental manifestations.

But where are the intellectual propensities or powers of infancy?—In the external senses it is said, the innate powers of the mind being almost in a slumber. Pain cannot be indicated by language; screaming is not its sign. Convulsions do not apparently arise from inflammation, or any appreciable lesion of structure. The character of the pupil is not an accurate signpost to any particular cephalic disease. Patient and long-continued observation, and a careful examination of the whole surface of the body, and of the appearances of each part in reference to its functions, can enable the best of practitioners only to predicate, and then often with a doubt, that the disease is inflammation, or it is hydrocephalus, congestion, &c.

To the young practitioner a careful perusal of a few well-marked and selected cases of cerebral disease, faithfully detailed, is, we believe, of more utility than all the principles and diversified opinions of a whole host of pathologists.

Dr. Gerhard has had extensive opportunities of witnessing the affections upon which he treats; and very modestly remarks that "many of the observations are incomplete—none of them perfect, but they have all been collected

without the desire of confirming any previous opinion, or of teaching other results than such as will be warranted by rigorous deductions;" and, after making some prefatory observations on the importance of the physician attending to facts, and not being misled by theoretical and fanciful notions, he relates ten unfavourable cases, out of which only two recovered. We shall insert one or two as well worthy of transcription into the pages of our Journal. They are of considerable interest, inasmuch as they show the connexion between symptoms during life, and changes of structure observable after death. The classification which he adopts is "based upon the anatomical lesions of the cerebral organs, and is merely made for the convenience of the reader." "The title, *cerebral affection*, comprehends all the diseases in which the *predominating* symptoms consisted in some modification of the cerebral or nervous functions, excluding of course the cases of simple somnolence, stupor, or delirium, and not even admitting convulsions, or other general symptoms which were merely the precursors of death, and not permanent or essential elements of the disease."

The author classifies the more common diseases, first, into symptoms which indicate alterations of structure in the brain or its membranes without tuberculous deposition; 2ndly, where such deposition exist; and, 3rdly, where the symptoms were so marked that it would be extremely difficult, if not entirely impracticable, during life, to arrive at a correct conclusion.

The subsequent case displays the connexion between symptoms and morbid phenomena, showing a series of disorders occurring consecutively, in each of which the cephalic affection manifested itself.

"The following history I obtained from his mother, a woman of remarkable intelligence. He is the second child; was attacked with convulsions at the age of four months, immediately after a fall upon the floor; the convulsions returned frequently, especially during the period of dentition, which commenced at nine months and terminated at the age of three years. At this last epoch he was taken with croup (diagnosis of the physician who attended him); during the disease convulsions supervened, leeches were applied behind the ears, but the convulsions returned four times. From the age of three to four years he enjoyed perfect health; an eruption of scarlatina then appeared, preceded by convulsions, which ceased as soon as the eruption became general. At five years he had measles, with return of convulsions before the eruption. Since that time he has had no convulsions, his health good, excepting a fever in August last, accompanied with diarrhœa. He was vaccinated five times without success; has had an eruption of varicella, but neither small-pox nor hooping cough. The child is very intelligent, lively, and impetuous; learns readily; was fat and strong until August last, since that time he has become thinner, but has not coughed. Eight weeks before his entrance an eruptive disease of the scalp appeared, which no longer existed, notwithstanding the application of irritants to keep up the secretion, at the end of four weeks.

"On the 2nd or 3rd of January he fell in going to school, striking the back part of the head; since that time he complains of headach, but did not cease going to school until the 16th, when, after some days of increased cephalalgia, especially when near the stove, he returned home, complaining of severe pain in the head, and immediately vomited a greenish liquid. He was put to bed, and eight leeches were applied behind the ears; their application threw him into a violent fit of anger, accompanied with a convulsion characterised by the movement of the eyes and strong contractions of the limbs. From that time he was confined to his bed, the vomiting returning on several successive days. Since the month of August he has had a diarrhœa of five or six discharges daily, which ceased, and was replaced by obstinate constipation eight days before the symptoms. He has had fever; the convulsions have returned very frequently up to his entrance, especially after a second application of leeches to the temples three or four days previously, which was again followed by violent anger. Delirium within two or three days only.

"Present condition, February 2nd.—Hair and complexion fair; rather thin; skeleton well formed; decubitus dorsal; face pale; features not much distorted, but risus sardonicus when spoken to, and frequent grimaces, extending to all the muscles of the face, with slight spasmodic movements of the jaw and lips—the corner of the mouth a little drawn towards the right side. Eyes not injected, slight strabismus of the right, pupils neither dilated nor contracted, natural; stupor constant, but easily dissipated on speaking to him; answers are sometimes correct, at others incoherent; delirium and cries during the night; movement and sensibility natural, without rigidity; he asks for food more frequently than drink; tongue trembling, moist, whitish, and villous in the centre, reddish at the edges, not evidently deviated; deglutition easy; abdomen retracted, appears tender to pressure; no dejections; heat pungent and dry; pulse 80, small and feeble, but regular; respiration 26, irregular, a little elevated without dilatation of the nostrils, pure. Milk; hot pediluvia with ashes, twice; potion of Chaussier.

"3rd, Nine A. M.—Delirium during the night, commencing at eight o'clock last evening; since daylight he is calm; same decubitus; profound coma; eyes hollow; pupils dilated, contracting a little in a bright light, without a marked difference in size, regular, slight strabismus of the right eye; sensibility of the skin generally much increased, the slightest touch interrupting the coma and producing complaints; he complains of pains in

the forehead, but says he has none elsewhere. Movements of the limbs natural, without the least rigidity; mouth slightly drawn to the right side, frequent movements of the lips; answers generally correct; voice natural; deglutition easy; heat dry, but not acrid; breath fœtid; cough rare; pulse 80, regular; respiration 20, irregular, unequal; percussion of the chest sonorous, respiration vesicular without rhonchus; occasional complaints of pain in the abdomen. Potion of boric acid repeated; calomel, gr. iss.; ½ enema; diet.

"Five P. M. No subsultus observed; heat increased; pulse 120, quick and regular; respiration 30, high, irregular; same stupor, but sometimes he asks for drinks.

"4th. Coma alternating with delirium; convulsive movements of the limbs at noon; the other cerebral functions carefully examined offering no change since the 2nd, still constipated; abdomen retracted, the same complaints on pressure as on the rest of the surface; no plaintive cries, or cough, or dejection; urine twice or three times in the day, as previously, voluntary; pulse at five o'clock 136, small, quick, and regular; respiration 20, irregular and high. Same potion of 3j. boric acid to ℥v. of vehicle; 2 pediluvia with mustard; milk.

"5th, Eight A. M. Agitation and delirium during the night; same decubitus, knees more elevated; face paler; eyes more hollow; mouth a little opened, not evidently distorted; eyes closed habitually, same state of pupils; ill humour if touched; no rigidity of the muscles; sensibility of the skin generally augmented; the purple spots noticed at his entrance have now nearly disappeared; answers rather more distinct; cephalalgia; no subsultus; abdomen retracted—he complains when pressure is made upon it; thirst; deglutition easy; he never asks for food; constipation; skin hot; pulse 104, quick, small, regular. ℞. Calomel, gr. v. in three doses at two hours' interval; enema with ℥ss. of castor oil; sinapism to feet, twice; potion with boric acid.

"6th. Delirium during the night; same decubitus; mouth at present slightly deviated towards the left side; face pale; lips red, not swollen; eyelids adhering from the dried secretions; pupils dilated; strabismus doubtful; sensibility diminished, movement as before; no subsultus; coma more profound; answers extremely rare; skin hot; pulse 119, trembling, feeble, irregular; respiration irregular, high, stertorous, 20 per minute; abdomen retracted, indolent; no dejections. A drop of croton oil; blisters to the legs. Deglutition easy; the croton oil was followed by a copious evacuation half an hour afterwards; but the same coma, which existed since seven o'clock int he morning, continued; no convulsions or cries.

"7th, Eight A.M. The same symptoms continued during the evening of yesterday; some involuntary movements of the arms were observed; mouth closed, both commissures depressed, the left more than the right; pupils equal, less dilated, perfectly insensible to a strong light; insensibility complete without rigidity of the right limbs, the left are less insensible, not rigid; some vague motions of the arms occasionally; no subsultus; no replies; deglutition still possible; skin cool; pulse feeble, trembling, but regular, 180; respiration stertorous, 43; abdomen very retracted, indolent; another copious dejection during the night. An hour later the pulse was insensible.

"Death at 3 P. M.

"9th, *Autopsy forty two hours after death. Exterior.*—Slight rachitic deformity of the knees and feet; rigidity of all the limbs, especially the inferior; slight lividity of the thighs and posterior parts of the body, which is pale in general; sligh emaciation.

"*Head.*—A little blood flows from the exterior of the dura mater; longitudinal sinus empty; arachnoid very dry on the convex surface of the brain, no serosity beneath it; convolutions of the brain flattened; pia mater injected, especially posteriorly in the large veins; it may be detached without tearing the cortical substance. The arachnoid upon the convexity is neither transparent nor granulated. *Base*, presents a general yellow or straw colour in its middle portion, including the pons varolii, medulla oblongata, a part of the anterior and middle lobes of the cerebrum, the polygon behind the optic nerves, and nearly the whole of the inferior face of the cerebellum. The arachnoid in the yellowish portions has lost its ordinary polish on its free surface, and presents beneath it (that is, in the pia mater) a yellowish, concrete, firm matter, similar to concrete pus, and not very friable. The thickness of this substance or false membrane is very variable—near the commissure of the optic nerves it is about a line, diminishing towards the anterior and lateral parts of the cerebrum. The anterior lobes of the cerebrum adhere together by a numerous net-work of vessels; they cannot be separated without tearing the cerebral substance. Between the crura of the cerebrum, and beneath the yellowish substance described, we found an ecchymosis of blood which penetrated into the substance of the crura along their internal face to the thickness of one or two lines; the same infiltration of blood into the cerebral substance extends continuously into the two fossæ of Sylvius, to a greater degree and for a more considerable distance in the right than the left. The sides of the fossæ adhere by abundant filaments, formed apparently by vessels and the yellowish concrete substance. The optic nerves adhere strongly to the brain. Arachnoid in general may be de ached without injuring the cortical substance. Lateral ventricles contain about three ounces of limpid serosity in the two cavities. Consistence of the cerebrum normal, cortical substance moderately coloured; the medullary a little dotted with blood—the part of the crura nearest the ecchymosis is a

little yellowish but firm. Cerebellum pale, firm; arachnoid rather more adherent than on the cerebrum. Pons varolii and medulla oblongata firm, pale. Foramen of Munro dilated, fornix and septum lucidum as well as the three commissures retain their usual aspect. Spinal marrow firm, white.

"*Abdomen.*—Stomach containing a dark-coloured mucous liquid; mucous membrane greyish, neither mamillated nor injected; consistence normal; strips three to five lines in great tuberosity, six to eight on the faces, one to two inches on the small curvature. Duodenum yellowish, containing very few crypts. Small intestine. Upper half coloured yellow by the contents; the valvulæ a little greenish; no redness excepting at the lower part of the ileum, which offers some arborisations; consistence every where good; glands of Peyer little prominent, of the same colour as the adjoining membrane; isolated follicles not noted; mesenteric glands firm, not tuberculous, of the usual size. Large intestine. Contents not noted; cæcum and ascending colon offer numerous arborisations which cease in the transverse colon, the membrane afterwards is pale; consistence every where good; strips more than an inch in length. Liver of middle size, of good consistence, not fatty; gall-bladder contained a dark bile. Spleen three inches in length, containing a small tubercle. Kidneys firm, livid. Bladder contracted.

"*Thorax.*—Lungs a little engorged with blood, especially on the left, but crepitant and permeable, not hepatised or tuberculous; some bronchial glands of different size are tuberculous, yellow, and friable. Heart presented nothing remarkable—details not noted.

"The previous history in this case is more perfect than can be obtained from many children at the Enfans Malades; the child was born of parents subject to convulsions, the same disposition seems to have been transmitted to their children. The subject of this observation was intelligent, lively, but irritable and delicate, subject to cerebral symptoms when other diseases existed, each application of leeches augmented instead of diminishing the convulsions. An accidental fall upon the head seems to have been the exciting cause of the symptoms which preceded death. These followed an ordinary course—vomiting, constipation, somnolence, delirium, coma, with convulsions. The anatomical lesions of the arachnoid were very marked, but the brain presented a lesion of its substance, consisting in a yellowish colour of the crura without softening, and an ecchymosis of considerable extent. Some tubercles existed in the bronchial glands, but not elsewhere. The intestinal canal offered nothing remarkable, notwithstanding the habitual diarrhœa."

The subject must be continued in a future number, when we shall present the connexion established between brain symptoms and alterations of structure in the brain or its membranes. The prolixity of the article and the minuteness are the chief faults. We shall make no apology for extracting so long a case as the preceding, believing it, as we do, to be interesting, partly as it will show to our brethren in this country the care and trouble which is evinced by foreigners in narrating cases and observing facts.

GONORRHŒA FROM MENSTRUATION.

To the Editors of the London Medical and Surgical Journal.

Gentlemen,—Permit me, through the medium of your valuable periodical, to offer a few remarks on a very interesting subject, and to which I would beg to call the attention of the profession. I shall place the position in an interrogatory form: viz. whether a man, from having had connection with a woman during the period of her menstruation, might not afterwards, from that cause, be affected with gonorrhœa, and whether that disease might not be again communicated by him in having intercourse with another female?

The following account of two cases of a similar nature, which have lately come under my observation, will tend in some degree to favour a reply in the affirmative. On the third or fourth day after connection a slight tingling sensation was observed at the extremity of the urethra, which soon became of a smarting character, more particularly while voiding urine, the pain extending for some distance down the urethra; the discharge of a thick straw colour, slight at first, but gradually increasing in quantity, with painful erections, so violent during the night as to prevent sleep. After continuing so about a fortnight the discharge began to lessen under the use of zinc injections and aperient medicines. The painful erections were somewhat relieved by the exhibition of pills composed of camphor and the extract of henbane, the mercurial ointment with camphor being occasionally rubbed in along the course of the urethra towards the latter stage. By this treatment within a month the patients were entirely cured.

These cases, I think, cannot be doubted to be precisely similar to gonorrhœa, and I entertain a strong opinion that a disease can be thus communicated, and that it may be propagated by one person to another, and produce results in every respect similar to those of gonorrhœa. The foregoing cases, I am convinced, did not arise from a female labouring under gonorrhœa, but believe that owing to the irregularity of living, and great disturbance of the menstrual function, the fluid becomes vitiated in quality, and acts as a morbific poison when applied to the delicate lining membrane of the urethra, producing similar effects as the contact of gonorrhœal matter to the same surface.

I have been induced to lay these cases before the profession, not as being merely new and isolated facts, for they have been noticed before, but with the object of drawing the attention of more experienced members to cases of a similar nature. Such a frequent and troublesome complaint merits, I conceive, great attention, and I am induced to believe gonorrhœa, on some occasions, to be contracted independently of any specific virus. A bad habit of body, debilitated constitution, and, consequently, impaired and depraved secretions, more particularly of the uterine functions, it may, I think, be allowed, are not unlikely to produce such a change on the mucous membrane of the urethra in the male sex as is evinced in true gonorrhœa.

I am, Gentlemen, &c.

W. Barnard.

OBSTRUCTION OF URINE FROM CALCULI LODGED IN THE URETERS.

To the Editors of the London Medical and Surgical Journal.

Gentlemen,—Should you think the following summary of a case of obstruction of urine from calculi lodged in the ureters, which occurred during the time I was a pupil at the Birmingham General Hospital, worth insertion, I shall feel obliged by its appearing in your valuable Journal.

I am, Gentlemen,
Your obedient servant,
James Wilkes.

Royal Westminster Ophthalmic Hospital, Jan. 17th, 1835.

John Parr, æt. 38, a stout plethoric man, was admitted into the hospital on the 15th Sept., 1832. About ten days before he noticed that his urine was much diminished in quantity, being, however, with the exception of a little headach, and a dull pain in the loins, to which he had been occasionally subject for some time, in perfect health. He applied to a surgeon, who considered it merely as a case of diminished secretion, and employed appropriate remedies. He continued at his work (a miller), little troubled by his complaint, for two or three days, when he had increased pain and tenderness in the loins, especially on the left side, vomiting, and general uneasiness. He had not made more than a few spoonfuls of water, he felt no desire to do so, nor did any urine escape on introducing the catheter. These symptoms continued up to his admission into the hospital.

He states, that about four years ago he passed two small calculi, and six months since made a little bloody water. He has enjoyed very good health, and been temperate in his habits. For the last ten days he has not made more than half a pint of turbid urine; he is cheerful, and perfectly rational; thinks his illness trifling, and complains only of headach and pain in the right lumbar and iliac regions, with tenderness on pressure. There is no distension of the abdomen, or anasarca. Pulse 86, full and bounding; tongue dry, furred in the centre; skin dry and of a natural temperature; thirst. Has not vomited for the last three days. No water followed the introduction of the catheter.

Without copying the daily reports of the case, it may suffice to say that he soon fell into a typhoid state. The vomiting recurred occasionally; his throat became sore and ulcerated; his tongue dry, and coated with brown fur. Cerebral symptoms then set in; he was very drowsy: the pupils were contracted and insensible; when roused he was quite rational, and complained only of headach and pain in his back. These symptoms were soon aggravated; he became delirious and comatose; his breathing oppressed and stertorous; and he died on the 21st, not having made more than ℥iv of water since being in the hospital.

The treatment employed was chiefly general and local bleeding, the warm bath, blistering, salines, purgative enemata, and tinct. lytiæ. The blood taken from the arm contained a large proportion of serum, but, unfortunately, it was not analysed. An urinous smell was detected in his breath the day before his death.

Externally, the body presented no remarkable appearance.

Thorax.—About a pint of dark-coloured serum was effused into the left side; the upper lobe of the lungs adhered to the pleuræ, and, on cutting into it, was hepatised, and of a deep red colour; the lower lobe crepitated, but was congested, and infiltrated with red frothy serum. Strong and universal pleuritic adhesions on the right side, and serous infiltration, but no hepatisation.

Heart.—Cavities much enlarged, especially the left ventricle, the walls of which were about three times their natural thickness.

Abdomen.—No effusion into this cavity. Stomach, liver, spleen, pancreas, and intestines, quite natural; no traces either of inflammation or ulceration could be discovered in the latter. Both kidneys were much enlarged, especially the left. On making sections of them, they were found to be invested by a thick adipose capsule, firm and dense in structure, but easily separated from the kidney. In some parts it was nearly an inch in thickness. The left kidney and its capsule weighed ℥xviii. The pelvis of this kidney was distended with urine, and very much enlarged. The mouth of the ureter was blocked up by a conical calculus more than an inch in length, moulded to the shape of the opening of the ureter. The infundibula contained some sabulous matter, and two small calculi about the size of peas. Both kidneys were pale in structure. The left ureter was natural in size, and free from obstruction in the rest of its course. The right kidney was natural in size; the

pelvis and the ureter, to about the middle of its course, were very much dilated and distended with urine: at this point two calculi were firmly impacted in it, about an inch distant from each other, one oblong, the other round; the ureter below was pervious, and admitted a common-sized probe, while above the little finger would pass readily into it. There was a good deal of sand in the infundibula. Bladder empty, healthy in structure.

Head.—Vessels of the membranes exsanguine. Effusion of serum and patches of lymph between the arachnoid and pia mater on the convexity of each hemisphere, but in no other part. Ventricles healthy; choroid plexus pale. Brain firm in structure. The obstruction in the right ureter was complete, and the urine could only have passed down the left, guttatim, and that very slowly.

ACETUM OPII SEDATIVUM.

To the Editors of the London Medical and Surgical Journal.

Gentlemen,—Having had the honour of presenting a paper to the Royal Medico-Chirurgical Society, which was read at their last meeting, January 13th, 1835, entitled "On the Preparation of the Acetum Opii Sedativum, and its use as a sedative in the treatment of mania, melancholia, puerperal mania," I will, with your permission, extract that portion of the paper which refers to the preparation, &c. I shall feel honoured by its insertion in your valuable Journal, in order that the profession may have the opportunity of preparing and giving it a trial, as it is considered to be highly deserving of employment, by authorities so eminent as Dr. Elliotson and Dr. Paris *. To Dr. Elliotson I am indebted for its name.

I am, Gentlemen,
Your obedient servant,
J. H. Horne, M.R.C.S.

5, *Gerrard-street, Soho,*
Jan. 14*th*, 1835.

Formulary.—Take three times the quantity of the best opium, reduced to fine powder, that is ordered by the London Pharmacopœia for two pints of tincture; add to the opium two pints of dilute acetic acid. After they have digested a few hours, add to them six or eight pints of rectified spirits of wine. Macerate about seven days, and then carefully filter, in order to separate the insoluble parts of the opium, or introduce the liquor into a retort, accurately closed, and distil off the spirit. The product in the retort, after the spirit has all passed over, is the required acetum sedativum.

If the distillation be carefully conducted, the result will always prove of one uniform strength. One minim will be equivalent to three of the tincture of opium, free from spirit, and will keep, without changing, for an indefinite time.

The acetum opii sedativum will be found to be the same as, or very similar to, Mr. Battley's Liq. opii sedativus (except in its strength, which latter falls short, according to the opinion of our most able experimentalists, as nearly j. to ij., instead of j. to iij.), a preparation too well known to require description, except in regard to its mode of formation, which the preparer, in spite of his ranking as a scientific chemist, has hitherto kept a profound secret. Should this slight effort of mine be the means of eliciting that secret my object, in part, will be attained.

The rationale of the process may be briefly stated as follows:—the acetic acid unites with the morphine of the opium, forming an acetate of morphia, which is held in solution by the dilute acid; the remaining ingredients of the opium, acted on by the rectified spirits of wine, are extracted, and detained by the acid, after the spirit has been distilled over.

I shall be happy to give a fuller description, if required by any of your numerous correspondents, should the subject be considered of sufficient interest to be allowed to excite inquiry in your useful and scientific Journal.

[We regret exceedingly, that want of space precluded the insertion of Mr. Horne's communication in our last number. In addition to the objections, which he brings forward against the liq. opii sedativus of Mr. Battley, it may be stated, that it is far from possessing uniformity of strength, at least we have found that, under precisely the same circumstances, thirty minims will occasionally have a greater effect than fifty. We understand that this is not the case with Mr. Horne's preparation; it is perfectly uniform. Dr. Thomson, of the North London Hospital, has given it a trial, and, we understand, considers it to be a most valuable therapeutic agent.—Eds.]

* In commendation of the process and preparation I am proud to add the following valuable testimony from Dr. Paris:—

To Mr. Horne.

Sir,—I do not see any objection to the process you have suggested for obtaining an acetic solution of the active matter of opium. The product is certainly highly distinguished by its narcotic odour and flavour. I think it merits a trial, for we cannot be too well provided with a variety of forms of so important a medicine. Yours obediently,
J. A. Paris.

January 17*th*, 1835.

DISTILLED WATERS.

To the Editors of the London Medical and Surgical Journal.

Gentlemen,—In perusing your number of Jan. 10, I find a formula, given by a correspondent (L. S.), for the preparation of car-

minative waters, founded on anything but scientific principles.

The most important part of your correspondent's note relates to *his* mode of preparing these waters, and denounces all others as producing inefficient, inelegant, and unequal menstruums, while his own formula obviates all inconveniences.

Now, gentlemen, had he practically proved the correctness of his assertion, or chemically thought, he would have found it liable to every objection.

It is not a scientific combination with either mucilage or sugar, and more so with both, inasmuch as it greatly assists the decomposition of water, besides forming a filthy turbid liquid, when filtered, and moreover does not impregnate the water with the essential oil by forty or fifty per cent., compared with the following simple process of adding the essential oil to about eight times its quantity of S. V. R., and rubbing it with mag. carb. q. s. to the consistence of a thick syrup, then gradually add the water, which, when filtered, is rendered perfectly transparent.

I am, Gentlemen,
Your most obedient servant,
JOHN FARMER.

Putney, 10*th Jan.*, 1835.

AMAUROSIS IN WATCHMAKERS, ETC.

To the Editors of the London Medical and Surgical Journal.

GENTLEMEN,—I have lately derived great pleasure and information from the perusal of the late Mr. Thackrah's valuable works on the Trades, a book which is unparalleled in the British language; indeed, as far as I am aware, Ramazzini's production is the only other book extant on the subject.

Mr. Thackrah has accumulated an immense mass of matter relative to the diseases and injuries to which tradesmen in almost every walk of life are subject; and he has also shown great ingenuity, in many instances, in pointing out a remedy, more especially for the mechanical causes of disease. I do not mean to intimate that the work cannot be improved, nor do I wish it to be understood that all the trades have been included. Such is not the case; the task would have been too arduous for one or even for ten men; but Mr. Thackrah has set an example which every one who has it in his power is bound to follow; he has become the pioneer in a path but seldom trod; the difficulties attending it, however, will be amply compensated by the advantages to be derived from the discoveries which will be made during our progress.

One of the diseases left unnoticed by Mr. Thackrah is amaurosis, as affecting watchmakers, surgical instrument makers, cutlers, and indeed all persons whose business necessitates the constant or almost constant employment of the eyes on minute or very brilliant objects. My attention has been particularly directed to this subject, inasmuch as since I commenced practice, I have had several cases come under my notice which I could attribute to no other cause, and, ascertaining that the men were engaged in a trade which obliged them to employ the eyes on minute objects, I was induced to make some inquiries, the result being, as above stated, that certain classes of tradesmen, watchmakers, &c., are peculiarly liable to gutta serena. I am acquainted at this present moment with a surgical instrument maker, who is amaurotic from this cause: his brother, who is engaged in the same business, is similarly affected. I was for some time induced to consider that, in the latter class of men, the continual flashing of highly-polished surfaces before their eyes, as in grinding lancets, &c., might be the cause of the disease; but a passage which I have recently met with in perusing Sir Charles Bell's Bridgewater Treatise has put me upon a different way of thinking. I shall beg leave to conclude by extracting the paragraph.

"It is easy to show that if the eyes were steady vision would be quickly lost; that all these objects, which are distinct and brilliant, are so from the motion of the eye; that they would disappear if it were otherwise. For example, let us fix the eye on one point, a thing difficult to do, owing to the very disposition to motion in the eye, but by repeated attempts we may at length acquire the power of fixing the eye to a point. When we have done so, we shall find that the whole scene becomes more and more obscure, and finally vanishes. Let us fix the eye on the corner of the frame of the principal picture in the room: at first, every thing around it is distinct; in a very little time, however, the impression becomes weaker, objects appear dim, and then the eye has an almost incontrollable desire to wander. If this be resisted, the impressions of the figures of the picture first fade, for a time we see the gilded frame, but this also becomes dim. When we have thus far ascertained the fact, if we change the direction of the eye but ever so little, at once the whole scene will be again perfect before us.

"These phenomena are consequent upon the retina being subject to exhaustion. When a coloured ray of light infringes continuously on the same part of the retina, it becomes less sensible to it, but more sensible to a ray of the opposite colour. When the eye is fixed upon a point, the lights, shades, and colours of objects continuing to strike upon the same relative parts of the retina, the nerve is exhausted; but when the eye shifts there is a new exercise of the nerve, the part of the retina that was exposed to the light is now opposed to the shades, what was opposed to the different colours is now opposed to other colours, and the variation in the exciting cause

produces a renewed sensation."—*Bell on the Hand*, p. 317. Third edition.

It appears evident, from the experiment just quoted, that if the eye be fixed steadily and unremittingly, although not for a long time, it will produce amaurosis or abolition of vision, lasting for a longer or a shorter period. If this can take place from such a cause, in force for a little time only, *à plus forte raison*, will it occur when the eye is thus employed, not only for a few minutes in the day, but for hours, and that too during the greater and better part of a man's life.

I am, Gentlemen,
Your obedient servant,
Jan. 19*th*, 1835. M.R.C.S.

THE

London Medical and Surgical Journal.

Saturday, January 24, 1835.

ADDRESS TO THE MEDICAL PROFESSION.

WHATEVER may have been formerly your hopes or fears, respecting a salutary revision and correction of the confused heap of laws affecting your profession, there can be no doubt now, that they will, ere long, be thoroughly amended; the advocates of general Reform, in returning one of your own body, who is a determined foe of the abuses which cling to and burthen your noble art, as a Representative in Parliament, has added a momentum to your cause, and given the stamp of certainty to your expectations.

In vain shall an obstinate few, whose hard heads indicate an insufficient cavity for brains, endeavour to obstruct your onward march. No obstacles, which such a knot of dissentients from the general voice can roll in its way can, for even a brief period, arrest your progress, or impede the overwhelming array of reason and conviction, leagued in support of a righteous Reform, "rari nantes in gurgite vasto." The abettors of ancient abuses and misrule have had their *night*, and already behold, through the dawn of improvement, which ushers in your *day*, their doom. Verily, their winding sheet has been bespoken! their epitaph written! while your glad Pæans are commencing.

Meanwhile it is not less incumbent on every one of you to buckle on his armour, and exert his energy and activity in promotion of the object in view, for, although the event is certain, apathy on your side might delay its completion. Let each Reformer be on the alert, and, although the circle in which he may act be narrow, remember that his brethren are in the field, widening, by their co-operation, the circuit, until its aggregate extent cover the land.

Nor shall you want, in your just endeavours, the support of an enlightened public, who at length tardily perceive that Medical Colleges were at first formed for the security of public health, and the advancement of the science they pretended to foster, but which in effect they strangled. Nor shall you want, we say, the support of that public, which to suppose regardless or indifferent to the result of your struggle would be to suppose them careless of their own welfare, health, and safety. Bear in mind, also, that the public press has declared, on more than one occasion, that the Augean pile of corruption, adhering to and disgracing our medical institutions, must be swept away; you may, therefore, calculate on its sympathy and powerful assistance.

With respect to the shape in which your Reform ought to appear, doubtless there are many differences of opinion among you, and could they all be clubbed together and put in execution a pretty monstrous Hydra would start up in mockery of our hopes. This, however, being impossible, the most rational mode of proceeding for you to adopt will be, to compare your conflicting systems together,

and by conceding a little in one point, and being conceded to in another, come at last to an amicable understanding. In this fusion of contending opinions some temper will be required, for each party will, as is usual, defend his own offspring as the beau-ideal of perfection. This adjustment is however indispensable,—let the watchword be *practicability*, and if perfection cannot, as it most assuredly cannot, be attained, lose not your 'vantage ground by dissensions among yourselves on that score, but sinking minor differences, appear in the field, backing with unanimity some scheme, which, although not exactly that of any particular party, may answer the reasonable expectations of all. If discord sow her iron teeth among you your cause suffers. Be wise therefore,—a house divided against itself falls.

Among your parties two are conspicuous,—one digging around the present unsteady ground of the Colleges, &c., essays to shake down the tottering edifices which encumber it, intending, out of the fallen materials, to frame one simple structure, into which all medical professors shall be admitted,—in a word, levellers upwards,— *One-Faculty-men.* The other, more moderate, or less desperate, inclines to the conservation of the said institutions, upon condition, however, of their thorough purification. Of the relative strength of these factions we will not now give an opinion, but go so far as to say, we think it will be easier to fulfil the latter than the former intention.

Medicine has been termed a conjectural art: if it be so, the glorious task devolves on you to place it on a more definite footing, to elevate it on a more durable and less dubious pedestal. That this has not already been accomplished is owing to causes easily explained. You all know, or ought to know, that while divinity and law, sciences more pleasing in their study than yours can pretend to be, have been held in the highest respect, and cultivated under the most favourable auspices from time immemorial, medicine has only been recognised by legal enactments and their ambiguous protection since the last three hundred years; and even then, only one, the aristocratic branch, was so favoured. The other branches were practised by the unlettered and uninitiated without hinderance; indeed, the lapse of but a few years has vindicated the profession of surgery from its alliance with its degraded first acquaintance. Another fungus of a better class, but yet unseemly, still clings to and lessens it in the public opinion, which cannot be brought to conceive that the ugly trade of a drug-vender is compatible with professional respectability or eminence. Alas, for you! although many of your body are highly honourable men, are well educated, and possess qualifications adequate to any emergency that might occur, yet, *proh pudor!* the ginger beer, soda water, matches, chemicals, nondescripts of fearful cut and omen, *et id genus omne*, standing on your shelves and grinning from your shop—yes, *shop*-windows stamp the name of traders and not professors deeply on you—men cannot, when on the bed of sickness and appalled by the presence of danger, recognise in you such practitioners as ought to be flown to as a last resource. Your coat of motley is bad wear;—doff it then; —excise this wen of drugs from the throat of your surgical man, and give it, not to the dogs, but to a subordinate class, who also should receive an education fitting them for such business.

As knowledge is admitted to be power, let us acquire as much as we can, instead of sitting down contented with a micro-

scopic quantity of it. Let there be, in future, a classic, and thinking, disciplined foundation for the superstructure you are about to raise, or, believe it, the estimation in which you seek to be held by society will soon be at a discount. The possession of a well-digested and liberal education has been the principal means of elevating the physician so far above you in public appreciation; for, if medical attainments alone were taken as the standard, you might rank yourselves their equals, if not superiors. Get, then, this lever—this weapon of might, into your hands, and with it you may move all things, aye, even the abuses which you well know infest and disorder your profession; with it you may for ever banish or bury them at a hopeless depth, without fear of ignorantly substituting others as bad in their room. Your judgment, being enlightened, will advance your science, and enable it to grapple with diseases now deemed incurable, to succour the now hopeless victim of despondency, and place yourselves upon ground well defined and defended, and not so exposed and obscure as it is at present. You will prune with skilful hands the laws which now afford you no shield, but rather beleaguer you, and, finally, you will cause medicines to be legislated upon in an enlarged sense, and demand that all who profess medicine, in whatever title they may delight, shall, by a careful study of every deviation from health in the human body, both internal and external, prepare themselves by similar exercises for their career, without reference to their future title.

The first meeting of that learned body, the College of Physicians, will be held on Monday evening the 26th, when it is expected there will be an overflowing house.

Report of Societies.

LONDON MEDICAL SOCIETY.

Monday, January 19th, 1835.

Dr. Shearman, Treasurer, in the Chair.

Loss of Memory—Strychnine in Paralysis—Hooping Cough.

The discussion was one of a very intermittent character, commencing with a case of partial loss of memory, then turning to hooping-cough, reverting to the case first narrated, then again changing to strychnine in paralysis, and finally concluding with the subject of hooping-cough.

The case of loss of memory was mentioned by Mr. Moore, but very imperfectly detailed. The patient was a young lady, who had long been under the care of a water-doctor, for dyspeptic and other symptoms. Mr. Moore was suddenly sent for in consequence of symptoms of head affection of great severity having manifested themselves. The lady, it appeared, entirely forgot, afterwards, the use and meaning of words; facts, places, &c., she remembered perfectly, but the proper use of words she had entirely lost, so that she would employ one word for another. This she was gradually overcoming, so that she could, at the time Mr. Moore mentioned the case, make use of words of two syllables, but in her pronunciation and mode of re-acquiring her knowledge of the English tongue, she was exactly like a foreigner learning the language. On cross-examination it appeared that the lady had suffered from headach for several days previous, referred more especially to the os frontis, and the vision of the right eye was rather dimmer than usual. There was not any paralysis of any part of the body. A suggestion having been thrown out that the lady might be malingering, Mr. Moore observed that the patient was possessed of good sense, and a lady of education, she could have no motive for deception, and indeed was put to great inconvenience and loss by the complaint. He further remarked that she considered the disease to have been caused by strychnine, which he believed the water-doctor administered.

Dr. Whiting had tried strychnine in paralysis, and had given it in large doses without producing any such effect. One of his patients had taken it for six months, beginning with a sixth of a grain, and gradually increasing it to five or six grains in the day, but with only temporary benefit.

Dr. Shearman had used it in paralysis, and had derived great advantage from its employment. He had never seen it cause disturbance of the sensorial functions, but it had produced twitching of the muscles.

The subject of hooping-cough, which had been introduced at an early part of the evening by Mr. Headland, occupied the rest of the discussion. Mr. Headland in his introductory remarks, mentioned the opinions of two medical men respecting this disease. The one

declared that he had never lost a patient from hooping-cough, the other that, in all cases of this complaint, there was inflammation of the lungs. After some general observations, and not a few compliments to Dr. Whiting, Mr. Headland addressed himself to the Doctor, and asked him if he would treat pneumonia attending pertussis with calomel, as in cases of common inflammatory action affecting the pulmonary tissues.

The Doctor was of opinion that the pneumonia inflammation, complicating hooping-cough, should be combated by the ordinary measures, although the chances were against success, as there were two complaints to treat instead of one. In treating simple inflammation of the lungs, the Doctor is in the habit of prescribing the hydrarg. submurias every hour, with small doses of the antimonium tartarisatum, from one-fourth to one-tenth of a grain every hour, according to the irritability of the stomach.

The question of Mr. Headland proved to be rather a *ruse*, inasmuch as he himself considered the tonic plan of treatment the best, or, at least, equally successful with the antiphlogistic.

Mr. Honeywood strongly recommended camphorated embrocations to the spine, from which he had derived great benefit.

[We are happy to inform our readers that Mr. Dendy's little patient, the subject of vicarious hepatic and vesical disorder, whose case was narrated at the previous meeting, is nearly recovered.—Rep.]

Foreign Medicine.

Cæsarean Operation performed on a Living Woman compared to that practised on one who suddenly died in the last month of Utero-Gestation.

BY DR. REUTER.

The woman, the subject of the first observation, was operated on in consequence of malformation of the bones of the pelvis, produced by rickets. She survived only eight days after the operation, and died from metro-peritonitis. The child was extracted alive. The second operation was performed on a woman immediately after death; the child was also dead.

The only interest that these two cases present, is from the following comparative results. Whatever may be the difficulty of determining the exact period to perform this operation on the living, it is much greater to give an exact time, when it should be performed on a person who has suddenly died. In the latter case, the certainty of these indications depends not only on the life of the infant, but also on the death of the mother. But it is at times impossible to say whether the mother is dead or not, in the short space of time that is requisite to save the life of the infant, unless the mother has died from some evident external cause; the space of time is at most three hours. If the woman is alive she can, from the sensations she experiences, give some indication; moreover, in the case of sudden death, the infant participates more or less in the debilitated state, which has preceded the death of the mother, consequently the difficulty must be greater. The operation presents also more difficulties in the latter than in the former; in fact, in a dead female, or in a person apparently dead, the stagnant blood in the veins escapes with greater facility, and gives rise to considerable effusion, which circumstance, together with the inactive and flaccid state of the uterus, renders less certain the hand of the operator, and, in case of apparent death, might lead to some very dangerous result. In the living woman, on the contrary, the uterus is firmer, it is more resistant, and the venous system is not so much distended with blood.

We may add to the remarks of M. Reuter a very favourable termination of an operation, which was performed by Professer Stoltz at Strasbourg, on a woman, twenty-six years of age, only forty-four inches in height. The anterior posterior diameter of the pelvis was estimated at two inches and a half. The child in this case was living. The operation had been performed four days, at the time we acquired our information.

Cholera at Marseilles.

We are happy to state, on good authority, that the cholera has been much on the decrease in this capital. The total number of deaths that have taken place have not exceeded 20. The terror which at first invaded the whole of the inhabitants has in a great measure subsided.

Anomalies in the Arterial and Nervous Systems.

M. Jordin, Interne de l'Hospice des Enfans Trouvés, gives a description of a very interesting instance of anomalous arrangement of the arterial and ganglionic nervous systems, occurring in a child who died in consequence of imperfect anus, the rectum terminating in a cul-de-sac an inch above the os coccyx. The aorta communicated freely with the pulmonary artery through the ductus arteriosus. It gave origin, before its curvature, to a trunk common to both carotids, which proceeded perpendicularly upwards. At its curvature it gave origin to the left subclavian, and finally to the right subclavian, which, arising from the termination of the arch, passed transversely behind the œsophagus in front of the vertebral column, then entered between the scaleni. At the second lumbar vertebra the aorta gave off the cœliac trunk, the superior mesenteric, the right renal, the spermatics, and divided into two branches; the first continuing in the direction of the aorta, and of almost equal size, gave off the inferior mesenteric, ran to the

posterior parietes of the bladder in the median line, passed to its summit, and from thence to the umbilicus; the second branch, arising from the posterior branch of the aorta, at an acute angle with the preceding, of half the diameter, passed a little to the left in front of the spine, as far as the sacro-vertebral angle. There it dipped into the pelvis, passed between the sacrum and rectum, forming a curve from the left to the right, with the convexity downwards, and running upwards again in front of the right sacro-iliac symphysis, to terminate under the crural arch of the same side. In this course it furnished all the branches for the nourishment of the inferior part of the trunk and the lower extremities; first, at the sacro-vertebral angle, the right and left lumbar arteries; secondly, an artery distributed to the left lower limb, which nearly corresponded to the external iliac artery, taking nearly the same direction, furnishing the same branches, but, in addition, supplying the iliac muscles with branches, which, in the normal arrangement, come from the hypogastric; thirdly, from the convexity of the pelvic curve successively arose, from the left to the right, most of the branches which are commonly given off by the two epigastrics. The branches which exist are very small, and imperfectly developed. The middle sacral artery was entirely wanting.

The great sympathetic accompanied the arterial system in its regularity, suitably developed at its superior part, but very slightly at its inferior, where a sacral ganglion is only found, the coccygean is wanting.

The cerebro-spinal apparatus did not participate in these anomalies.

Comparative results of Vaccination performed on many thousand individuals.

A subject which has caused some considerable discussion during the past year at the Royal Academy of Medicine, is the utility of re-vaccination. The following are the comparative results practised in the army at Wurtemburg, in four regiments, during the summer of 1833.

Out of	4,802 individuals	1,633 individuals
1st. Properly vaccinated	1,208	577
Fine cicatrices	664	293
Defective	559	116
No cicatrices	281	168
Marked with the small pox	4	——
2ndly. Pustule incomplete	956	366
Of which,		
Fine cicatrices	572	193
Defective	278	134
No cicatrices	104	19
Marked with small-pox	2	——
3rdly. Individuals in whom the character of the vaccination had not been determined	223	——
Of whom,		
Good cicatrices	159	——
Defective	71	——
No cicatrices	1	——
Marked with small-pox	2	——
4thly. Individuals in whom neither the character of the pustule nor cicatrix has been determined	691	——
5thly. In whom a second vaccination has been useless	1,722	740
Of these bore good cicatrices	957	382
Defective	500	222
No cicatrices	257	136
Marked with small-pox	8	——

This result perfectly agrees with those recently obtained from the Prussian army, in which, on an average, one-third of the individuals vaccinated have well formed pustules. —*Rust's Magazine, h.* 39, *h.* 3.

On the Medicinal Employment of the Root of the Iris Fœtidissima.

BY M. LECANU,

Professor at the Ecole de Pharmacie.

Professor Clarion having in the course of last year requested me to analyse the root of the *iris fœtidissima*, which it appears one of our most celebrated physicians, M. Recamier, has employed with advantage in certain diseases, and more especially in dropsy, I have made various experiments upon it, and, from the various results, I am led to conclude that it contains, 1st, an exceedingly acrid volatile oil; 2ndly, resin; 3rdly, bitter matter; 4thly, colouring matter; 5thly, saccharine matter; 6thly, gum; 7thly, a free acid; 8thly, wax; 9thly, salts; 10thly, lignine.

Now, among these different immediate principles, the most active is, undoubtedly, the volatile oil, although the resin, were it but for the tenacity with which it retains the volatile oil and the bitter matter also, cannot

be without power. If, then, we endeavour to draw from the results furnished by analysis, certain consequences, which will enable the practitioner to decide on the relative value of the preparations of the root of the *iris fœtidissima*, we shall see that, 1st. all things being otherwise equal, the dried root, and more especially the root dried and pulverised, ought to be less active than the fresh, inasmuch as the act of defrication will dissipate a portion of the volatile oil, and, at the same time, assist its decomposition, as most of the essential oils are susceptible of absorbing oxygen from the atmosphere, and becoming resinous. 2ndly. That the product of the aqueous decoction can contain very little of the active principle, because the ebullition drives off a great portion of it, and the essential oil, partly combined with the resinous matter which is present, and perhaps, also, partly resinified by contact with the air, cannot be dissolved in the vehicle employed, which is a very bad menstruum for such an active principle. 3rdly. That the alcoholic and ætherial tinctures, containing the whole of the essential oil, will be more energetic than corresponding aqueous solutions, and the former will be the more powerful, the more concentrated the alcohol is which is employed, because then the resin, as well as the volatile oil, will be more completely dissolved, and because the saccharine and gummy matters will be more thoroughly eliminated. 4thly. That the alcoholic extract ought to be more active than the aqueous, because, in the first place, the action of heat will have been less continued, and all the volatile oil and resin will be retained, while the saccharine and gummy matters will be separated; and, 5thly, that the distilled water and spirit of the *iris fœtidissima* will prove energetic preparations, but the distilled water contains more of the essential oil than the spirit does. The proof is that a decoction made with the residue after the distillation of the water is almost completely deprived of the volatile oil, whilst a similar preparation made with the residue from the spirit contains a sufficiently large proportion.

Finally, it may be said that the practitioner must decide by practical experience, which of the preparations of the *iris fœtidissima* deserves to be preferred, since it may readily happen that the experience of the physiologist will not confirm the opinion of the chemist. Our means of analysis are as yet imperfect, and our knowledge as to the reciprocal influence exercised by the proximate principles of organic matters on each other so incomplete, that he cannot decide, *à priori*, on such questions.

Extract from an Essay on Paralysis induced by the Preparations of Lead.

In every one of seventeen cases of this disease, observed by M. Tanqurel, the paralysis affected the upper extremities—in five only were the lower limbs affected at the same time; in five aphonia, or some impediment of speech, was present; and in one, the intercostal muscles, the pectoralis major, and sterno-mastoideus appeared to have lost their contractility. Although generally the paralysis is limited to the muscular system, without disturbing the sensibility of the parts, yet cases sometimes occur, in which this latter function is injured simultaneously; it may be either exalted, impaired, or altogether abolished. The first of these morbid conditions is the most common.

The muscles most frequently affected are the extensors of the fingers, the supinators, and the abductors and adductors of the thumbs. When the lower limbs are the seat of the paralysis, there is almost always some affection of the upper ones at the same time. As stated above, the tongue may become completely or partially paralysed, and the patient will then stammer, or even lose all power of articulate speech; or the muscles of the larynx may be affected, and the voice be quite lost. The paralytic symptoms induced by lead generally come on very gradually, and almost imperceptibly, as the colicky symptoms abate and disappear; at other times, the colic and paralysis are simultaneous in their attack, and the former may be relieved, while the latter seems to be not at all affected; and, lastly, the paralysis has been known to supervene suddenly, during the severity of a colic attack, banishing it, and assuming as it were its place in the system; but this is a rare occurrence. One particularly important fact has been often overlooked by authors, namely, that the saturnine paralysis may be induced, without having been preceded, or without being accompanied, by any affection of the intestines. Its duration varies from a few days to several years. As a general remark, it is worthy to notice, that most cases of lead palsy are, at least in their early stages, susceptible of cure.

The remedies which have been most approved by experienced men are, electricity, sulphureous baths, and the internal and external use of the nux vomica. M. Rayer, the distinguished physician of the La Charité Hospital, has been eminently successful in the treatment of this disease; he employs the strychnine, first internally, and then in the endermic method, conjoining the daily use of sulphur baths, or fumigations. The pathology of lead palsy is not at all known. "Would to God," exclaims a French reviewer of the Hippocratic school, "that many other diseases, so well known in an anatomical point of view, were as easily cured."—*Revue Médicale.*

British Hospital Report.

WESTMINSTER HOSPITAL.

Integumental Wound of the Throat—Penetrating Wound of the Abdomen, and Injury to the Liver.

John Tabernacle, æt. 55, was admitted into the Westminster Hospital with wound of the throat and abdomen; he was placed in Northumberland Ward. He is reported to have been out of work for some time, which caused great despondency and depression of spirits, and he was thus induced to destroy himself. His habits were very dissipated; whenever he was in possession of money, he would go to a public-house and drink gin until it was spent, and then he would work to get more, when it would go in the same way. The wound of the throat was about an inch and a half in extent, but neither vessels nor the trachea were injured, the knife having grazed the cartilage, without penetrating through it. The wound in the abdomen was about four inches above the umbilicus, and the integuments with the muscles were readily discovered to have been divided, but it could not be ascertained whether or not the peritoneum was wounded, without having recourse to greater manipulations than were deemed advisable. There was no protrusion of the contents of the abdomen.

The patient was much depressed, had a very weak and small pulse, and continued so during the remainder of that day. The next, some symptoms of inflammation having come on, he was bled from the arm, but without much advantage. He died the same night.

The following were the appearances on examination of the body.

The wound in the neck was merely cutaneous. On opening the abdomen a large incision was found in the epigastrium, larger within, and presenting a ragged margin, of a deep red colour. The left lobe of the liver had been wounded in three places, near, however, to each other, the central one being about half an inch in depth, the others merely superficial. The surface of the liver presented the *nutmeg* character. The peritoneum lining the abdominal wall in front of the liver was of a deep red hue, inclining in a few places to lividity. The whole surface of the intestines had its capillary vessels minutely injected with scarlet blood. About half a pint of a thin light-brown fluid was diffused in the abdomen, obviously bile which had escaped from the wound in the liver.

Compound Fracture of the Leg.

Joseph Atkins, ætat. 6, was admitted Aug. 22, 1834, into Percy Ward, under Mr. Guthrie. The child was brought in late in the evening, having been knocked down and run over by a coach a short time previous. Both bones of the right leg were fractured about the middle of the limb, the injury being complicated with an anterior and posterior wound, the latter the larger, and at each of which the fractured bones were protruded. The fracture was reduced with some little difficulty, the wounds dressed, and the little patient placed on Amesbury's apparatus.

For rather more than a fortnight, the little fellow had not a single bad symptom; cold lotion was assiduously applied, the limb was kept in its proper position, no pain was experienced, and there was not any constitutional disturbance, No other medicines were given except occasional aperients. Towards the end of the first week in September, the case assumed another aspect. The wounds were secreting freely, but the pus discharged was of an unhealthy appearance and odour; the granulations were flabby, and those on the exposed bone glassy; one or two points of integument had given way on the anterior surface of the leg, and had formed ulcers. the whole limb was very much tumefied and œdematous, but discoloured only in the neighbourhood of the wounds; the slightest touch on any part of that extremity caused him intense pain, and, indeed, he was constantly crying from the acuteness of his sufferings; superadded to these symptoms were a quickened and frequent pulse, restless nights, and all the signs of irritative fever.

Up to this time, the boy had been in Percy Ward, he having been originally placed there, but his symptoms now indicating great danger Mr. Guthrie ordered him to be removed to another and more healthy ward, as he considered Percy Ward to be quite pestilential. (This remark applies to the Percy Ward of the old hospital, a narrow, ill-ventilated room, and certainly not at all fit for the purposes for which it was appropriated, the reception of accidents. It is a certain fact that when erysipelas showed itself in this ward, the cases were more severe, and assumed more of the adynamic character than in any of the others.)

The child was accordingly placed in John's Ward, and the effect produced was very striking; the pulse fell, and was neither so frequent nor so quick; the tumefaction of the limb diminished, pressure could be readily borne, and he did not suffer much, comparatively speaking, from pain; he slept much better, and his health, generally, became improved. The discharge continued unhealthy. No medicines had been given, and cold lotions only were applied to the limb.

For some time after, indeed until the end of October, the discharge continued profuse and unhealthy; the child's health, meanwhile, was gradually improving, and no unpleasant symptoms arose, with the exception that the fractured extremities of bone did not unite. In the beginning of November, the discharge was evidently lessened, and the ulcers were healed; cicatrisation was completed by the 17th. The splints were soon after removed, as bony union had taken place, although the limb was not strong. He gradually acquired more power and strength in the limb, and was dismissed soon after.

APOTHECARIES' HALL.

Names of Gentlemen to whom the Court of Examiners granted Certificates of Qualification on Thursday, Jan. 15, 1835:—Patrick Benson, Roscommon; George Cooper, London; Charles Collambell, London; Montgomery Robertson, Scotland; Henry Shaw, Exeter.

MISCELLANY OF FACTS.

A new Candidate for Medical Honours.—A general practitioner, who, not being very particular how he procures his patients, was lately in want of an errand-boy to carry out his medicines, &c., and placed a placard in the window to that effect. A man shortly afterwards made his appearance, proposing his son to fill the vacant situation. After a variety of questions had been answered satisfactorily, the final one was put,—"What wages do you expect?"—"Why, sir, I am not particular about that, as I would wish his services to be considered an equivalent to *his being taught the business.*" His services were declined. Having the pleasure of knowing a little of the *being* in question, we were not surprised at the father embracing such an opportunity, but was rather astonished at the refusal.

Dr. John Steggall has been appointed to the vacant office of Professor of Toxicology to the Medico-Botanical Society, and Dr. Hancock, late of Essequibo, has been placed on the Council, vice Dr. Clendinning, resigned.

Mr. Costello and Mr. King are endeavouring, we understand, to found a small hospital for the reception of those affected with calculi in the urinary organs. We hope they will succeed in their undertaking. Every hospital in London, however, is always anxious to admit cases of the above description; therefore, on this account, we fear they will not meet with so much success as they might expect.

Hospitals liable to Bastard Children.—A weekly pamphlet abused, a short time since, one of our metropolitan hospitals for not admitting a woman who was in the agony of labour. We are sure, if the fact was known that hospitals are obliged, if a woman is admitted under such circumstances, to take care of the offspring, the public would not be astonished at such apparent unfeeling conduct. St. Thomas's Hospital has at this present moment, to our knowledge, three or four children to provide for; and, we may add, much to the credit of one of the surgeons of that institution, has been relieved from the burden of another, by his taking upon himself the care of the infant.

APPOINTMENTS.

Naval.—Mr. W. Dunbar, assistant-surgeon to the Speedy. Mr. J. L. M'Call, assistant-surgeon of the San Josef, to the Pike. Mr. G. D. Austin, assistant-surgeon to the Royalist. Surgeon Chas. Mayberry, to the Ordinary at Portsmouth, vice Gent. Lillies, who has resigned.

General.—Dr. Castle, physician to the Brighton Dispensary.

Retirements.—Mr. Dixon, surgeon to the Surrey County Jail. Dr. O'Brien, medical officer of the Ballylander Dispensary, Ireland. Dr. Sillar, physician to the Liverpool Northern Hospital. Mr. ———, late house-surgeon of the Stockport Infirmary.

DEATHS.

In Demerara, Dr. Hugh Walsh, late of Paisley. Mr. Samuel Bromley, surgeon R.N., and surgeon for the last twenty years to the Kent Dispensary. By a fall from his horse, Mr. Armstrong, of Six Mile Cross, Tyrone, surgeon. Mr. Wm. Perry, of Everton, near Liverpool, surgeon. Mr. James Copner, surgeon, of Ilfracombe, Devon. Dr. Carrol Humphrey, at Calcutta. At Dinapore, East Indies, Assistant-Surgeon W. Scott. At Kyouk Phyoo, East Indies, Assistant-surgeon J. Bryce, M.A. At Bombay, Dr. John Archibald, assistant-surgeon 48th Foot. Mr. James Frazer, surgeon, Cheltenham. Mr. John Burbidge, of Hallaton, Leicestershire, surgeon. Mr. Abraham Billson, surgeon, of Rowell, Northamptonshire.

WEEKLY BILLS OF MORTALITY.

London, Tuesdays, 13th and 20th Jan. 1835.

Abscess	9	Hooping-Cough	31
Age and Debility	73	Indigestion	1
Apoplexy	11	Inflammation	66
Asthma	53	Inflammation of the Bowels & Stomach	9
Cancer	7	Inflammation of the Brain	7
Childbirth	12	Inflammation of the Lungs and Pleura	20
Consumption	140	Insanity	4
Convulsions	57	Jaundice	2
Croup	6	Liver, Diseased	9
Dentition, or Teething	15	Measles	40
Dropsy	33	Mortification	7
Dropsy on the Brain	20	Paralysis	4
Dropsy on the Chest	5	Small Pox	20
Erysipelas	3	Spasms	6
Fever	15	Stone and Gravel	1
Fever, Intermittent or Ague	1	Thrush	1
Fever, Scarlet	24	Unknown Causes	39
Fever, Typhus	1		
Gout	2		
Hæmorrhage	5		
Heart, Diseased	4	Stillborn	22

Males 397 Females 400 Total 797

BOOKS RECEIVED.

The Practice in the Liverpool Ophthalmic Infirmary for the year 1834; being the First Special Report. By Hugh Neill, Surgeon to the Charity. pp. 55. Longman. 1835.

An Exposition of the Nature, Treatment, and Prevention of Continued Fever. By Henry M'Cormar, M.D. pp. 202. Longman. 1835.

LITERARY INTELLIGENCE.

In the ensuing autumn will be published, in one vol. 8vo., A System of Human Anatomy, compiled from the works of Cruveilhier, Meckel, and other authors of celebrity, with notes. By Mark Noble Bower, M.R.C.S.

CORRESPONDENTS.

A Contemporary's Reply to the Letters of Dr. Graves and Dr. Stokes.—"Letters bearing the signatures of Dr. Graves and Dr. Stokes, of Dublin, denying the correctness of their lectures, as published by us, appear in a new Journal; but, as we doubt the authenticity of these letters, we shall not notice them until next week, when we shall comment upon them as they deserve, unless disavowed in the meantime."—The above is the reply which Dr. Ryan makes to the letters published in this Journal, and which we submit for the judgment of our readers, repeating that the letters are at the Publisher's Office, for the inspection of the profession.

All Communications and Books for Review to be forwarded (free of expense) to the Publisher, 356, Strand, near King's College.

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BRADBURY AND EVANS, PRINTERS, WHITEFRIARS.